Office Supreme Court, U.S.
FILED
APR 11 1983

82-1672

No.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

USM CORPORATION,

Petitioner

VS.

SPS TECHNOLOGIES, INC.,

Respondent

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

GERALD D. HOSIER
HOSIER, NIRO & DALEIDEN, LTD.
135 South LaSalle Street
Chicago, Illinois 60603
312-236-0733

Of Counsel:

JOHN DELPONTI
General Patent Counsel
EMHART CORPORATION
Post Office Box 2730
Hartford, Connecticut 06101

OWEN J. MEEGAN
Assistant General Patent Counsel
USM CORPORATION
181 Elliott Street
Beverly, Massachusetts 01915

Attorneys for Petitioner

TABLE OF CONTENTS

	PAGE
OPINIONS BELOW	1
JURISDICTION	2
QUESTIONS PRESENTED	2
STATEMENT OF THE CASE	3
I. A Synopsis of the Facts	3
II. A Detailed Statement of the Facts	4
A. The 1969 Action	4
B. The Present Action	5
REASONS FOR GRANTING THE WRIT	8
I. In Elevating Finality To A Higher Priority Than The Redress Of Patent Fraud The Court Below Ignored Important Public Policy And Controlling Supreme Court Precedent	8
II. The Decision Below Conflicts With Decisions Of This Court And Those Of Other Circuits Which Have Held That Fraud On An Administrative Agency In Securing A Right Is Fraud On A Court That Is Led To Unknowingly Enforce The Fraudulently Procured Right	11
III. The Requirement That Litigants Be Truthful In Representations Embodied In Proposed Consent Decrees Is An Issue Of Monumental Public Importance	13
IV. The Court Below, In Summarily Reversing The District Court, Incorrectly Declined To Apply Rule 60(b)(5), F.R.Civ.P. To Consent Decrees, Contrary To The Plain Terms Of The Rule, The Decisions In Other Circuits And The Holdings Of This Court	15
CONCLUSION	16

TABLE OF AUTHORITIES

Cases:	PAGE
American Equipment Corp. v. *Wikomi Mfg. Co.*, 630 F. 2d 544 (7th Cir. 1980)	3, 10
Automatic Radio Mfg. Co. v. *Hazeltine Research, Inc.*, 176 F. 2d 799 (1st Cir. 1949), 77 F. Supp. 493 (D. Mass. 1948)	9
Automatic Radio Mfg. Co. v. *Hazeltine Research, Inc.*, 339 U.S. 827 (1950)	9
B. B. Chemical Co. v. *Ellis*, 314 U.S. 495 (1942)	14-15
Blonder-Tongue v. *University of Illinois Foundation*, 402 U.S. 313 (1971)	9
Bros Inc. v. *W. E. Grace Mfg. Co.*, 320 F. 2d 594 (5th Cir. 1963)	15
Business Forms Finishing Service, Inc. v. *Carson*, 452 F. 2d 70 (7th Cir. 1971)	9-10
Butterworth v. *United States*, 112 U.S. 50 (1884)	13
Compco Corp. v. *Day-Brite Lighting, Inc.*, 376 U.S. 234 (1964)	9
Hazel-Atlas Glass Co. v. *Hartford-Empire Co.*, 322 U.S. 238 (1944)	3, 11, 12, 13, 14
Kaspar Wire Works, Inc. v. *Leco Engineering & Machine, Inc.*, 575 F. 2d 530 (5th Cir. 1978)	9
Keystone Driller Co. v. *General Excavator Co.*, 290 U.S. 240 (1933)	11
Lear, Inc. v. *Adkins*, 395 U.S. 653 (1969)	5, 8, 9, 10
Mas v. *Coca-Cola Co.*, 163 F. 2d 505 (4th Cir. 1947)	12
Mercoid Corp. v. *Mid-Continent Inv. Co.*, 320 U.S. 661 (1944)	14
Mercoid Corp. v. *Minneapolis-Honeywell Regulator Co.*, 320 U.S. 680 (1944)	14
Morton Salt Co. v. *G. S. Suppiger Co.*, 314 U.S. 488 (1942)	14

	PAGE
Precision Inst. Mfg. Co. v. *Automotive Maintenance Machinery Co.*, 324 U.S. 806 (1945)	2, 11, 13, 15
S & E Contractors, Inc. v. *United States*, 406 U.S. 1 (1972)	12, 13
Safe Flight Instrument Corp. v. *United Control Corp.*, 576 F. 2d 1340 (9th Cir. 1978)	15
Sears, Roebuck & Co. v. *Stiffel Co.*, 376 U.S. 225 (1964)	9
State of Pennsylvania v. *Wheeling & Belmont Bridge Co.*, 18 How. 421 (1855)	15-16
System Federation No. 91, Ry. Emp. Dept. v. *Wright*, 364 U.S. 642 (1961)	16
Toscano v. *Comm'r. Internal Rev.*, 441 F. 2d 930 (9th Cir. 1971)	12
United States v. *American Bell Telephone Co.*, 128 U.S. 454 (1888)	11
United States v. *Swift & Co.*, 286 U.S. 106 (1932)	15, 16
Universal Oil Products Co. v. *Root Refining Co.*, 328 U.S. 575 (1946)	11
Walker Process Equip. v. *Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965)	11

OTHER AUTHORITIES

Title	
28 U.S.C. § 1254(1)	2
Rule 60(b)(5), F.R. Civ. P.	3, 15, 16
Les Nouvelles, *Journal of the Licensing Executives Society*, Vol. 2, p. 76 (June, 1973)	10
"To Bind or not to Bind: Bar and Merger Treatment of Consent Decrees in Patent Infringement Litigation", 74 Colum. L. Rev. 1322 (1974)	14
Wright, Miller & Cooper, *Federal Practice and Procedure: Jurisdiction*, § 4443, p. 389-391	9

No.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

USM CORPORATION,

Petitioner

VS.

SPS TECHNOLOGIES, INC.,

Respondent

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

The petitioner, USM Corporation, respectfully prays that a writ of certiorari issue to review the judgment and opinion of Judge Posner on behalf of the United States Court of Appeals for the Seventh Circuit entered in this proceeding on December 3, 1982.

OPINIONS BELOW

The district court opinion is reported at 514 F. Supp. 213 (N.D. Ill. 1981) and is printed at A1[1].

The Court of Appeals opinion is reported at 694 F. 2d 505 (7th Cir. 1982) and is printed at A77. The Judgment of

[1] The abbreviation "A" herein refers to the Appendix bound with this Petition.

the Court of Appeals appears at A94. The order of the Court of Appeals denying rehearing and rehearing in banc appear at A95.

JURISDICTION

The Judgment of the Court of Appeals for the Seventh Circuit was entered on December 3, 1981. A timely petition for rehearing in banc was denied on January 11, 1983, and this petition for certiorari was filed within 90 days of that date. This Court's jurisdiction is invoked under 28 U.S.C. § 1254(1).

QUESTIONS PRESENTED

(1) Whether the judicial policy of finality underlying the doctrine of *res judicata* deserves a higher priority in the law than the redress of judicially declared patent fraud, in light of the far reaching social and economic consequences of a patent which this Court has held to "give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud". *Precision Inst. Mfg. Co.* v. *Automotive Maintenance Machinery Co.*, 324 U.S. 806, 816 (1945)?

(2) Whether consent decrees embodying recitations of patent validity and infringement are enforceable under the doctrine of *res judicata* where the district court entering the decree later determines in proceedings between the same parties that the patent was procured by fraud on the Patent Office and that the decree in violation of the Constitutional limitations on the scope of patent monopolies embraces subject matter determined by the court to have been deliberately abandoned to the public domain?

(3) Whether judicially determined fraud on an administrative agency of the United States Government in a quasi-judicial proceeding to obtain a right that materially impacts the public interest is *a fortiori* a fraud on the Court that is unknowingly induced to lend its powers to enforce the fraudulently procured right?

(4) Whether a party in seeking the entry of a consent decree judicially declaring the scope and enforceability of its rights in controversy owes a duty to the court to disclose any underlying fraud in the procurement of such rights, the breach of which duty renders the decree unenforceable?

(5) Whether the district court order denying prospective enforcement of a prior consent decree from the date of filing of the action below on the grounds of fraudulent procurement of the patent: (a) constitutes a proper exercise of judicial discretion under Rule 60(b)(5), F.R.Civ.P.; and (b) strikes an appropriate balance between the policy of *res judicata* and the public interest policy in granting "full protection to the public against a patent obtained by fraud" *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U.S. 238, 250 (1944)?

STATEMENT OF THE CASE

I. A Synopsis of the Facts

In a meticulous eighty-four page opinion, the district court below found by "clear and convincing" evidence that SPS had "committed actionable fraud on the Patent Office" in procuring issuance of its Villo patent and that the case was "exceptional" because "both fraud and bad faith have been established" (A76).

The district court granted USM plenary relief from the 1974 filing date of its action, but denied pre-action relief because under the controlling Seventh Circuit authority of *American Equipment Corp.* v. *Wikomi Mfg. Co.*, 630 F. 2d 544,547-549 (7th Cir. 1980), the "1971 consent decree has and will continue to be looked upon as having *res judicata* effect for all matters preceding the filing of the action at bar" (A6). The relief granted by the district court comported with the discretion reposed in it under Rule 60(b)(5), F.R.Civ.P. with respect to litigated judgments.

The appeals court below, acknowledging that it had not reviewed the district court's findings of patent fraud and, therefore, accepting them to be amply supported by the evidence (A79,92), nevertheless held that USM was precluded from securing any relief from the consent judgment on the grounds of *res judicata* (A79-80) despite findings of the district court which revealed that: (a) the Villo patent had been procured by a pervasive bad faith scheme involving five separate instances of deliberate patent fraud (A45-56); (b) the recitations respecting the scope of the Villo patent in the consent judgment were false and were inconsistent with contemporary representations being made by SPS through its same counsel to secure another patent (A34-38,52-53); and (c) SPS drafted the consent decree to capture within the scope of the Villo patent subject matter it had deliberately abandoned to the public domain and but for such misconduct "SPS would not have been able to charge USM with infringement of the Villo patent and the two lawsuits between these parties would never have occurred" (A51-52).

II. A Detailed Statement of the Facts

A. The 1969 Action

USM and SPS have been since the 1950's and continue as major competitors in the field of self-locking fasteners. In 1969, SPS sued USM for infringement of SPS' Villo patent, a patent that SPS has asserted to dominate the patch fastener market in the United States.

USM claimed that it held royalty-free Villo license under the grant-back provisions of an October, 1955 agreement between the parties thereby mooting any issue of patent validity or infringement. This license contention was severed from the infringement and validity questions, and tried separately on January 19-20, 1971 (A3).

SPS, in reply to USM's license claim, argued that it had conceived and reduced to practice the claimed invention of the Villo patent prior to the agreement and, thus, that the Villo patent was not subject to the grant back provisions (A3). USM's license defense was defeated by SPS' showing that its conception and reduction to practice of the Villo invention commenced in August, 1953, and led directly to the filing of the "original" Villo application in January, 1956 (A3).

The suit was thereafter privately settled with USM acquiescing in a license. A consent judgment entered in May, 1971 recited that the Villo patent was valid and infringed by USM self-locking bolts of a stated construction "regardless of whether a primer material is applied to the thread surfaces prior to or concurrently with the application of the nylon composition" (A3). In the words of the district court, "Because the matter was settled, no judicial hearing ever was held on validity or infringement of the Villo patent" (A3-4).

B. The Present Action

The present suit was initiated in June, 1974 to challenge validity and infringement of the Villo patent on the grounds that: (a) the policy of *Lear, Inc.* v. *Adkins*, 395 U.S. 653 (1969), and its Seventh Circuit progeny rendered consent decrees in patent cases unenforceable as a matter of law; and (b) the absence of an injunctive provision in the consent judgment limited the decree to retrospective application only (A4). The first district judge in an opinion reported at 184 U.S.P.Q. 476 sustained USM's position on (a) above since the evidence showed that the decree "was merely a matter of formalizing a license agreement".

USM proceeded with discovery, unearthed SPS' fraud, and amended its pleadings to state, for the first time in either action, that the Villo patent was fraudulently procured and that such fraud constituted additional grounds for vacating the consent judgment (A4). Shortly before trial, a second district judge held that "while it is indeed a difficult assessment to make" *res judicata* effect should be extended to the 1971 consent decree, apart from any issues of fraud or other misconduct" (A4).

The district court following trial found that SPS had engaged in a series of fraudulent acts during prosecution of the Villo patent, but for which the patent would never have issued (A39).

The truth revealed that the 1953 work culminated in SPS filing a first Villo application in January, 1954, that this application expressly disclosed and claimed patch fasteners made with the use of primers applied before and concurrently with the nylon, that this application had been rejected by the Patent Examiner on a prior art Parker patent, that SPS' technical staff and a key officer (Mr. Sproat) had carefully reviewed the rejection because the application was "important to the company", that a contemporary memo correctly reported their common view that Parker covers "exactly what we were trying to do" and their conclusion to "drop" the application and that the application was in fact abandoned (A20-22). The district court held that the Parker patent "is an anticipatory reference to the Villo patent claims" (A46) and that SPS deliberately withheld the Parker patent from the Patent Office during prosecution of the 1956 Villo application when the examiner failed to discover the reference in his own search of the prior art (A45-49).

The district court decision also finds that the 1954 and 1956 Villo applications have twenty-seven phrases of identi-

cal wording including phrases up to thirty-seven words in length, that "the author of the 1956 Villo application consciously and deliberately deleted bonding agents and adhesives, including epoxy, as an element of the patch bolt structure described in the specification" (A29-32), that "the irrefutable documentary record leaves no doubt that SPS abandoned at least that portion of the 1954 application relating to the use" of such epoxy primers as a part of the patch bolt structure (A51), that SPS wrongfully acted "to conceal from" the Patent Office its abandonment of the 1954 Villo application and the use of primers disclosed therein (A50), and that, if SPS had disclosed such abandonment to the Patent Office as it was obligated to do, "SPS would not have been able to charge USM with infringement of the Villo patent, and the two lawsuits between these parties would never have occurred" (A51-52).

The district court further found that, contemporaneously with the original action against USM, SPS was secretly prosecuting an Epstein application, that, to secure allowance of Epstein, SPS represented that the Villo patent could not be construed to embrace products (such as USM's) made with the use of epoxy primers (A30-32), that such representations were made by SPS through the same counsel as was then of record for SPS in the first action against USM, that such representations in Epstein were inconsistent with the broader asserted scope of the Villo patent as recited in the 1971 consent judgment, and that the Villo representations were untrue (A34-38,49-53).

Additionally, the district court found that to secure allowance of its Villo patent SPS represented that nylon could be directly secured to a bolt to produce a commercially acceptable self-locking fastener, that in the Epstein application SPS represented that direct application of nylon

to a bolt would result in an inoperative product, that the representations "made in the course of defendant's Villo and Epstein patent prosecutions clearly are contradictory" and that the "representations made by SPS in its prosecution of the Villo patent were untrue" (A36).

REASONS FOR GRANTING THE WRIT

I. In Elevating Finality To A Higher Priority Than The Redress Of Patent Fraud The Court Below Ignored Important Public Policy And Controlling Supreme Court Precedent

This is the first case in the history of American jurisprudence where a federal court has lent its authority to the enforcement of a fraudulently procured United States patent. The clear injustice of this holding is rationalized by the court below on the grounds that the judicial policy of *res judicata* is a greater imperative to the law than the social and economic policies favoring the redress of patent fraud. In making this policy determination, the court below relied upon the questionable conclusions that "fraud is just another ground for contesting the validity of a patent" (A81), that "fraud is just a name for the misrepresentations and omissions that legislators or judges want to punish" (A82) and that fraud is just "a conclusion, rather than a standard" (A83).

The venerable policy determinations of this Court appear to align with the decision of the district court which decision was summarily reversed by the court below. For example, this Court has held that the "important public interest in permitting full and free competition" in ideas which do not merit patent protection outweighs "the competing demands of the common law of contracts", *Lear, Inc.* v. *Adkins*, 395 U.S. 653, 668, 670 (1969). Additionally, it has long been the settled law of all of the circuit courts of appeal that

consent judgments reciting only patent validity are unenforceable as a matter of public policy in view of the overriding public interest favoring judicial review of patent validity issues. See, for example, *Business Forms Finishing Service Inc.* v. *Carson*, 452 F. 2d 70, 75 (7th Cir. 1971).

Of further significance, this Court's decision in *Automatic Radio Manufacturing Co.* v. *Hazeltine Research, Inc.*, 339 U.S. 827 (1950), which was overruled by *Lear* involved not only a license contract, but as well a consent decree in which the licensee admitted patent validity and infringement. See *Automatic Radio Mfg. Co.* v. *Hazeltine Research, Inc.*, 176 F. 2d 799, 806 (1st Cir. 1949) and 77 F. Supp. 493, 495 (D. Mass. 1948). Thus, there is authority in this Court for the proposition that consent decrees in patent cases are *per se* unenforceable on public policy grounds. *cf. Kaspar Wire Works, Inc.* v. *Leco Engineering & Machine, Inc.*, 575 F. 2d 530 (5th Cir. 1978) ("the rules applicable to the effect of a judicial determination should not be applied automatically to consent judgments" at 538). "Patent cases present a special problem of preclusion" which in respect of the enforceability of consent decrees shall remain so "until the question is resolved by the Supreme Court", Wright, Miller & Cooper, *Federal Practice and Procedure: Jurisdiction*, § 4443, p. 389-391.

Now Justice Stevens in writing for the Seventh Circuit Court of Appeals held that "the policy considerations which underlie *Blonder-Tongue*, *Lear*, *Sears* and *Compco*[2] lead inescapably to the conclusion that lawsuit settlement agreements and consent decrees admitting patent validity are unenforceable". *Business Forms Finishing Service, Inc.* v.

[2] *Blonder-Tongue* v. *University of Illinois Foundation*, 402 U.S. 313 (1971); *Lear, Inc.* v. *Adkins*, 395 U.S. 653 (1969); *Sears, Roebuck & Co.* v. *Stiffel Co.*, 376 U.S. 225 (1964); *Compco Corp.* v. *Day-Brite Lighting, Inc.*, 376 U.S. 234 (1964).

Carson, 452 F. 2d 70, 75 (7th Cir. 1971). Other decisions below, e.g., *American Equipment Corp.* v. *Wikomi Mfg. Co.*, 630 F. 2d 544 (7th Cir. 1980), which accord *res judicata* effect to consent decrees reciting both patent validity and infringement and deny such effect to decrees reciting only patent validity are non-rational attempts at compromise that cannot be harmonized with the policy expressions of this Court.

Here, as this Court found in *Lear*, the attempt when faced with a "basic conflict in policy", to strike an intermediate position "responsive to the radically different concerns of the two different worlds of contract [here *res judicata*] and patent" is a failure. *Lear*, *supra*., at 1910—matter in brackets added.

The present dichotomy in judicial enforceability between consent decrees reciting both patent validity and infringement and those reciting only patent validity denigrates the sanctity of judgments and lends itself to abuse as occurred in this case.

Specifically, USM, believing that it held a license under the Villo patent, was sued for infringement without being given an opportunity by SPS to engage in prelitigation negotiation. SPS's trial counsel later wrote for publication: "Ever since *Lear*, I have been telling clients that the only way I could think of to bind the licensee would be first to sue him for infringement, then settle the suit by a consent decree that the patent is valid and infringed, and only then grant him a license under the patent." Les Nouvelles, *Journal of the Licensing Executives Society* (June, 1973, Vol. No. 2 at 76). Thus, the present status of the law encourages lawyers to promote unnecessary patent litigation and to frustrate the policies this Court promulgated in *Lear*.

But regardless of the policy balance in the absence of fraud, this Court has consistently held, contrary to the court below, that the policies underlying redress of patent fraud occupy a higher priority in the law than does *res judicata*. *United States* v. *American Bell Telephone Co.*, 128 U.S. 454 (1888); *Keystone Driller Co.* v. *General Excavator Co.*, 290 U.S. 240 (1933); *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U.S. 238 (1944); *Precision Inst. Mfg. Co.* v. *Automotive Maintenance Machinery Co.*, 324 U.S. 806 (1945); *Universal Oil Products Co.* v. *Root Refining Co.*, 328 U.S. 575 (1946); *Walker Process Equip.* v. *Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965).

The consistent holdings of the above cases, as exemplified by *Walker Process*, 382 U.S. at 350, establish that patents procured by fraud are "a special class of patents" which are to be stripped of all legal protection. The decision below which categorizes fraud "as just another defense to patent validity" fails to recognize the crucial policy distinction between fraudulently procured patents and merely invalid patents.

II. The Decision Below Conflicts With Decisions Of This Court And Those Of Other Circuits Which Have Held That Fraud On An Administrative Agency In Securing A Right Is Fraud On A Court That Is Led To Unknowingly Enforce The Fraudulently Procured Right

The possession and assertion of patent rights are "issues of great moment to the public" requiring of patent applicants an "uncompromising duty" of candor in relations with the Patent Office since only in that way "can that agency act to safeguard the public in the first instance against fraudulent patent monopolies". *Precision Inst. Mfg. Co.* v. *Automotive Maintenance Machinery Co.*, 324 U.S. 806, 818 (1945). It has been the historical imperative of this Court "to grant

full protection to the public against a patent obtained by fraud" by vacating the patent *ab initio*, regardless of the stage of the proceedings at the time the fraud is discovered. *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U.S. 238 (1944).

But even in circumstances lacking the overwhelming public interest factors attendant patent litigation, this Court and the Fourth and Ninth Circuit Courts of Appeal have held that fraud on an administrative agency in procuring rights is *a fortiori* a fraud on the court that is unknowingly led to enforce such rights. *S & E Contractors, Inc.* v. *United States*, 406 U.S. 1, 14 (1972); *Toscano* v. *Comm'r. Internal Rev.*, 441 F. 2d 930, 935 (9th Cir. 1971); *Mas* v. *Coca-Cola Co.*, 163 F. 2d 505 (4th Cir. 1947). No court to our knowledge, other than the court below, has ever reached a contrary result.

In *Toscano*, the appeals court observed that the "original fraud was not upon the Tax Court, but upon the Commissioner, just as in *Hazel-Atlas* it was upon the Patent Office", 441 F. 2d at 935. The Court held that "when a deficiency was assessed, and Toscano petitioned the Tax Court for determination, he carried the fraud into the Tax Court" and that:

> "Thus, he was continuing to defraud the Commissioner . . . but he was doing more; he was also perpetrating a fraud upon the Tax Court . . ." 441 F. 2d at 935.

The *Mas* court found that, in the "quasi-judicial" Patent Office proceedings, it is the rule that fraud justifies denial of a patent at any stage of the proceeding and that:

> "If this is a proper rule, as we think it is, to be applied by the Patent Office, a fortiori it is a proper rule to be applied by a court reviewing a patent office decision." 163 F. 2d at 510

In *S & E Contractors*, this Court cited *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U.S. 238 (1944) for its holding that:

> ". . . fraud on an administrative agency *or* on the court enforcing the agency action is ground for setting aside the judgment.' 406 U.S. at 14—*emphasis supplied.*

The decision below portends to have widespread implications on future litigation since many lawsuits have their origins in agency action. The appeals court decision sets a dangerous precedent by rewarding success in concealing fraud from an administrative agency and by establishing a higher standard for fraud on a court than for fraud on an administrative agency.

There is no justification for a difference in standard, particularly since this Court has recognized the Patent Office function as being of a judicial nature, *Butterworth* v. *United States*, 112 U.S. 50, 59 (1884). Indeed, because of the *ex parte* nature of Patent Office proceedings and the exclusive privileges granted by patents, this Court has recognized a special need to scrutinize the conduct of patent applicants. *Precision Inst. Mfg. Co.* v. *Automatic Maintenance Machinery Co.*, 324 U.S. 806 (1945).

III. The Requirement That Litigants Be Truthful In Representations Embodied In Proposed Consent Decrees Is An Issue Of Monumental Public Importance

The court below was unmoved by the fact that the representations of validity and infringement embodied in the consent judgment at the insistence of SPS were of necessity known by SPS to be untrue, given the unchallenged fraud findings of the district court. The appeals court was also insensitive to the fact that the consent decree below embodied false representations respecting the scope of the Villo patent and that SPS of necessity knew that it was broadening the Villo patent by the consent decree recitations

to cover subject matter which it had deliberately abandoned years earlier to the public domain and which fact of abandonment it had fraudulently concealed from the Patent Office per the district court's unchallenged findings.

The vast majority of all litigation is terminated by settlement, frequently by the entry of consent decrees. Patent litigation is no exception. Of all patent cases terminated in 86 federal district courts from 1949 through 1958, 72 percent were disposed of by consent. There is no "evidence that the nature of patent dispositions has substantially changed in recent years". Note, "*To Bind or Not to Bind: Bar and Merger Treatment of Consent Decrees in Patent Infringement Litigation*", 74 Colum. L.Rev. 1322, 1330 (1974).

Thus, consent judgment settlements are statistically responsible for the adjudication of rights far more frequently than are trials. The question of what, if any, responsibility a litigant has to the courts in connection with representations made in a consent decree is, therefore, a matter vital to the integrity of the judicial process.

Historically, this Court has held that a patent fraud which would have precluded issuance of the patent or foreclosed the right of the patentee to relief if discovered before the judgment is grounds for vacating the judgment. *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U.S. 238, 250 (1944). This Court has also consistently held that there is a compelling public interest in keeping the scope of patents within their legitimate bounds. *Mercoid Corp.* v. *Mid-Continent Investment Co.*, 320 U.S. 661, 665 (1944); *Mercoid Corp.* v. *Minneapolis-Honeywell Regulator Co.*, 320 U.S. 680, 682 (1944). It therefore follows that a party "may not obtain from a court of equity any decree which directly or indirectly helps it to subvert the public policy which underlies the grant of its patent". *Morton Salt Co.* v. *G.S. Suppiger Co.*, 314 U.S. 488, 494 (1942); *B.B. Chemical Co.* v.

Ellis, 314 U.S. 495 (1942). The decision below is in direct conflict with these principles.

If, as the court below held, the entry of a consent judgment, signed by a judge who was not even assigned to the case (see decision reported at 184 U.S.P.Q. 476), sanctifies patent fraud, then the courts will join administrative agencies, the deceived litigant and the public as "mute and helpless victims of deception and fraud", *Precision Inst. Mfg. Co.* v. *Automotive Maintenance Machinery Co.*, 324 U.S. 806, 818 (1945).

IV. The Court Below, In Summarily Reversing The District Court, Incorrectly Declined To Apply Rule 60(b)(5), F.R.Civ.P. To Consent Decrees, Contrary To The Plain Terms Of The Rule, The Decisions In Other Circuits And The Holdings Of This Court

The revision of the consent judgment exacted by the district court in this case was consistent with the familiar distinction between the conclusive, *res judicata* effect properly accorded decrees adjudicating accrued rights and those prospective features of a decree "that involve the supervision of changing conduct or conditions and are thus provisional and tentative". *United States* v. *Swift & Co.*, 286 U.S. 106, 114 (1932); *Safe Flight Instrument Corp.* v. *United Control Corp.*, 576 F. 2d 1340, 1344 (9th Cir. 1978) ("there is no merit in plaintiff's contention that the consensual nature of the Washington judgment somehow precludes relief under Rule 60(b)(5)—at 1344); *Bros Inc.* v. *W. E. Grace Mfg. Co.*, 320 F. 2d 594, 606 (5th Cir. 1963).

If a consent judgment is to have *res judicata* effect, then it is clearly indistinguishable from a litigated decree for purposes of Rule 60(b)(5), F.R.Civ.P. *United States* v. *Swift & Co., supra.* The power of a court of equity to vacate or otherwise modify the prospective effect of its decrees is "inherent in the jurisdiction of the chancery," *State of*

Pennsylvania v. *Wheeling & Belmont Bridge Co.*, 18 How. 421 (1855) and is explicitly conferred on district courts by Rule 60(b)(5), F.R.Civ.P.; *System Federation No. 91, Ry. Emp. Dept.* v. *Wright*, 364 U.S. 642, 648 (1961); *United States* v. *Swift & Co., supra.* A reviewing court may not disturb the trial court's discretion except upon a demonstrated abuse. *Id.*

In refusing to consider Rule 60(b)(5) while summarily overruling the district court's proper exercise of its discretion, the court below placed itself at odds with the precedent of this Court and that of companion circuits as cited above.

CONCLUSION

For all of the reasons stated, it is respectfully requested that this Court grant the present petition for writ of certiorari to the Seventh Circuit Court of Appeals to review the decision below.

Respectfully submitted,

GERALD D. HOSIER
HOSIER, NIRO & DALEIDEN, LTD.
135 South LaSalle Street
Chicago, Illinois 60603
312-236-0733

Of Counsel:

JOHN DELPONTI
General Patent Counsel
EMHART CORPORATION
Post Office Box 2730
Hartford, Connecticut 06101

OWEN J. MEEGAN
Assistant General Patent Counsel
USM CORPORATION
181 Elliott Street
Beverly, Massachusetts 01915

Attorneys for Plaintiff

APPENDIX

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

USM CORPORATION, Plaintiff	) No. 74 C 1514
vs.	) Before the Honorable) Nicholas J. Bua, Judge
SPS TECHNOLOGIES, INC., Defendant	) United States District) Court

O R D E R

In the matter at bar, the plaintiff, the USM Corporation, has challenged, on a variety of grounds, the validity of a patent owned by the defendant, SPS Technologies, Inc. After certain of the issues raised by USM were resolved in pretrial judgments, a non-jury trial was held on the claims presented in Counts I and IV of the plaintiff's complaint on October 24, 1978. With respect to those claims, after considering the testimony and evidence presented at trial, together with the various other materials submitted by the parties, the court makes the following Findings of Fact and Conclusions of Law. Rule 52(a), Fed. R. Civ. P.

FINDINGS OF FACT

I. THE PARTIES, JURISDICTION AND VENUE

1. The plaintiff, USM Corporation (hereinafter "USM"), is a New Jersey corporation, having its principal office and place of business in Farmington, Connecticut.

2. The defendant, SPS Technologies, Inc. (hereinafter "SPS"), is a Pennsylvania corporation having its principal office and place of business in Jenkintown, Pennsylvania.

3. The amount in controversy, exclusive of interest and costs, exceeds the sum of $10,000.

4. SPS has not contested the personal and subject matter jurisdiction of this court in respect to Count I and IV-V of USM's Amended and Supplemental Complaint, and the court finds that it has both personal and subject matter jurisdiction as to said Counts. Defendant SPS also does not contest, and the court further finds, that it has personal jurisdiction over SPS with respect to the claim made in Count III of USM's complaint.

5. SPS, on motion prior to trial, challenged the subject matter jurisdiction of this court as to Count III. This court, in a Memorandum Order dated June 12, 1978, denied SPS' motion. For the reasons set forth in that Order, the court finds that subject matter jurisdiction over Count III properly lies.

6. USM and SPS were parties to an earlier filed action in this court involving the same SPS patent at issue here, i.e. United States Patent No. 3,093,177, issued in the name of Joseph P. Villo (hereinafter "the Villo patent"). That action, styled Standard Pressed Steel Co. v. USM Corporation, et al., No. 69 C 2538, filed December 8, 1969, was settled in early 1971: (a) by USM acquiring non-exclusive license rights from SPS under the Villo patent; and (b) by the entry of a consent decree.

7. Venue over the matters at bar properly lies in this judicial district, and defendant SPS has not objected to the propriety of same.

8. The antitrust claim raised by USM in Count V of its Amended Supplemental Complaint was severed for separate and later trial in this court's Order of April 12, 1976, and jurisdiction is hereby reserved as to said Count. On June 12, 1978 summary judgment was entered against USM as to Counts II and VI of its complaint. Those matters, because they are the subject of a separate appeal by USM, formed no part of the October 24, 1978 trial.

II. THE PRIOR PROCEEDINGS AND THE ISSUES PRESENTED FOR TRIAL

9. To better clarify the issues presented in the case at bar, it is necessary to briefly trace the procedural history of the earlier suit in this court between USM and SPS. In that suit, USM included among its responses to SPS' infringement claim the contention that it [USM] held an irrevocable, royalty-free license under the Villo patent which was sufficient in scope to render any issue of validity moot. This license contention was severed from the validity and infringement questions, and tried separately on January 19-20, 1971.

The USM license claim was based upon a "grant back" provision in an October, 1955 license agreement in effect between the parties. SPS, in replying to USM's position, argued that it had conceived and reduced to practice the claimed invention of the Villo patent long prior to October, 1955, and thus that such claimed invention was not a later developed improvement, as contemplated by SPS' interpretation of the license agreement's grant back clause. As reported in 168 U.S.P.Q. 741 (N.D. Ill. 1971), modified 170 U.S.P.Q. 83, USM's license defense was defeated on the basis of evidence presented by SPS to show that its conception and reduction to practice of the Villo invention was commenced in August, 1953, continued "more or less steadily" through 1954 into 1955, and led directly to the filing of the "original" Villo patent application on January 30, 1956.

After this issue was resolved, the suit was privately settled, with USM acquiescing in a license. As part of that settlement, a "Judgment Order of Consent" was entered by the court on May 3, 1971. That consent decree recited that the Villo patent was valid and infringed by certain USM patch-type self-locking bolts of a stated construction, regardless of whether or not certain methods were used by USM in the manufacture of said bolts. Because the matter was settled, no

judicial hearing ever was held on validity or infringement of the Villo patent.

10. The present suit was commenced by USM in June, 1974, to challenge both the validity and its [USM's] purported infringement of the Villo patent on the grounds that: (a) the policy of Lear v. Atkins, 395 U.S. 653 (1969) and its progeny in this Circuit rendered consent decrees in patent cases unenforceable as a matter of law; and (b) the absence of an injunctive provision against infringement in the 1971 consent decree manifested a limitation on that decree to retrospective application only. Arguing primarily res judicata principles, SPS sought to preclude all discovery on the part of USM. USM, though, ultimately was able to gain all of the discovery it required.

Shortly before the trial in this cause, SPS renewed its motion for summary judgment on these issues, again contending that the 1971 consent decree must be given res judicata effect. On June 15, 1978 this court, on the basis of the legal issue then before it, concluded that "while it is indeed a difficult assessment to make," res judicata effect should be extended to the consent decree at issue. Memorandum Order, at 6-11.

11. Prior to this court's June 12, 1978 holding, however, USM had filed an Amended Complaint based upon evidence uncovered through the discovery SPS had attempted unsuccessfully to foreclose. This Amended Complaint set forth the following further and independent grounds for vacating the 1971 consent decree: (a) that SPS was guilty of fraud and inequitable conduct as to both USM and the court in the prior suit, and in its inducements to USM to accept — and the court to sign — the consent decree; (b) that SPS was guilty of fraud and inequitable conduct in its Patent Office procurement of the Villo patent, evidence of which was wrongfully suppressed by SPS in the prior suit with USM and in an even earlier suit with a third-party, Amerace Corporation; and (c) that on the record taken as a whole, it would be at the very least

inequitable to enforce the consent decree from the date of filing of the present suit.

12. In addressing these charges of USM, this court recognizes that the concept of fraud in a context of the present kind does not lend itself to simple and precise definition, but rather must be measured against fundamental standards of honesty and fair play. The court, however, is not without substantial case authority to guide it in its determinations in this action. In this regard, the legal and equitable principles that govern claims of patent fraud, and of unclean hands and inequitable conduct in the Patent Office and the courts, are well-rooted in Supreme Court doctrine. See e.g., Kingsland v. Dorsey, 338 U.S. 318 (1949); Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co., 324 U.S. 806 (1945); Hazel-Atlas Glass Co. v. Hartford-Empire Co., 322 U.S. 238 (1944); Keystone Driller Co. v. General Excavator Co., 290 U.S. 240 (1933).

13. A dispute also has arisen between the parties in respect to certain patch-type self-locking nuts produced by USM, which did not come into existence until at least one year after the 1971 consent decree was entered. As concerns this dispute, SPS, in the pretrial Order dated April 12, 1976 and in responses to formal requests for admissions, initially took the position that four variants of a USM-produced patch nut were within the compass of the Villo patent. On the eve of trial, two and one-half years later, however, SPS sought through its counsel to withdraw its infringement charges, and further contended that all questions of patent validity and infringement as to the USM patch nuts would be mooted by such action because no justiciable controversy would then exist between the parties on such issues. USM, in response, urged that, at the very least, it was entitled to a judgment of noninfringement of the Villo patent by the USM patch nuts.

Based upon the judicial admissions by SPS' counsel in open court to the effect that SPS would never again

assert the Villo patent against the USM patch nuts at issue, or against future USM products of like design, judgment on this issue was summarily entered against SPS on October 27, 1978, in order to permanently remove any cloud from USM's right to make and sell such patch nuts, and from its licensees' right to do likewise free from any renewed claims of infringement by SPS. 8 Wright & Miller, Federal Practice and Procedure §2761, at 805-06. See Ortman-Miller Machine Co. v. International Corp., 138 U.S.P.Q. 108 (N.D. Ill. 1963); International Minerals & Chemical Corp. v. Golding-Keene Co., 164 F. Supp. 101 (W.D. N.Y. 1958); Wallace Products, Inc. v. Falco Products, Inc., 145 F. Supp. 629, 630 (E.D. Pa. 1956). By virtue of that judgment, and as USM has paid no royalties in connection with said product, no justiciable controversy remains in respect to the USM patch nut infringement issue. See Drew Chemical Co. v. Hercules, Inc. 407 F.2d 360, 362-63 (2d Cir. 1969).

14. Apart from any issues of fraud or inequitable conduct, USM also has requested this court to reconsider its decision of June 12, 1978, attributing a res judicata effect to the 1971 consent decree. This request of USM, however, has been denied, on the ground that to grant the relief requested would be contrary to the law in this Circuit regarding the effect to be given consent decrees in patent actions. American Equipment Corp. v. Wikomi Mfg. Co. 630 F.2d. 544, 547-49 (7th Cir. 1980). That being true, the 1971 consent decree has and will continue to be looked upon as having res judicata effect for all matters preceding the date of the filing of the action at bar.

15. Having resolved the scope of the issues now before the court for decision, the technical subject matter, the Villo patent and the accused USM products will be reviewed in prelude to this court's analysis of the evidence presented on the contested issues.

III. THE TECHNICAL ISSUES

16. The technology involved in the matter at bar is relatively simple. Specifically, it is composed of "fasteners," i.e. ordinary nuts and bolts, with but a single modification to render them "self-locking." A "self-locking fastener" is one which, once installed, tends to resist loosening as caused, for example, by vibration. An ordinary bolt and lock washer is an example of a familiar self-locking fastener.

A number of self-locking fasteners are included among the prior art pertinent to the Villo patent. Prior to the Villo invention, for example, there were pellet or plug-type, strip-type and patch-type self-locking fasteners. The prior art pellet and strip-type fasteners were ordinary bolts into which a radial bore or slot had been made or struck to mechanically secure a pellet or strip of nylon or other resilient plastic. This plastic was mechanically secured into the deformed thread of the fastener so as to project a small distance above the crests of the threads. In the prior art patch type bolts, resilient plastic material was adhered to the unmodified threads of the bolt in an amount sufficient to project above the thread crests. The structural difference between these prior self-locking fasteners, and between them and the Villo invention, was the manner of securing the plastic to the bolt, i.e. mechanical versus adhesive bonding.

17. Pellet, strip and patch-type self-locking bolts all function in an identical fashion to achieve an identical result. When the bolt is threaded into a mating member, e.g. a nut, the resilient plastic material is forcibly compressed between the bolt and the mating nut, resulting in a resilient, but secure, frictional engagement between the bolt and the nut. The engagement, being frictional, prevents loosening of the members even under substantial vibration. This result obtains regardless of the circumferential arc or axial length of the plastic; the dimensions of the plastic affect only the degree of locking actions obtained.

IV. THE VILLO PATENT

A. The Disclosure of the Villo Patent Specification

18. The Villo patch bolt is a conventional bolt to which a solid block or "pellet" of conventional nylon, often shaped similarly to the nylon pellets or strips of the prior art pellet or strip-type bolts, has been adhered. In this regard, Villo himself has stated that "the pellet may be made of any desired shape and size" and that "the extent of the thread area covered by the pellet and the amount of material applied to the threads may vary with the degree of locking action required." The thread area covered, both axial and circumferential, thus is simply a matter of routine design choice.

19. When Villo bolts are made, a simple hand-operated die is used to press the nylon block into engagement with a pre-heated bolt. This action purportedly causes the contiguous surface of the nylon to melt — or fuse — and stick to the bolt by a fusion bond.

In the Villo process, the bolt is "heated to a temperative such that when the nylon pellet is forcibly pressed against it by the plunger" the temperature of the bolt "in the contact area will exceed the melting temperature of the nylon." Specifically, the bolt is heated by a furnace or oven to a temperature 50-60°F. higher than the melting point of the nylon. The pressure exerted by the plunger "may to advantage be on the order of one hundred pounds per square inch" and this "pressure is maintained until the temperature in the pellet contact area has dropped well below the [nylon's] melting temperature." On Villo bolts, the fusing of the nylon pellet to the threads thus is the sole means by which the components are bound together.

In summary, Villo discloses only a single patch bolt product made by securing a solid block of nylon by heat and pressure directly to the threads of a bolt,

without the use of a bonding agent or adhesive, to form a single fused juncture therebetween by means of a die which confines the pellet to preselected axial and circumferential dimensions.

B. The Villo Patent Claims

20. In the six and one-half years before the patent finally issued, SPS' Villo claims were repeatedly rejected by the Patent Office examiners. Many claims were cancelled and abandoned before the Villo patent issued in June, 1963, with the following independent claim:

> 1. A self-locking threaded fastener element wherein the self-locking characteristic is derived from a nylon plastic composition having fused juncture with a surface of the thread, said plastic being confined to a local circumferential and axial area of the thread, and being bound to the thread solely by said fused juncture.

The Villo patent accordingly discloses only one kind of patch-type self-locking bolt.

C. The Prior Art Relied Upon by the Patent Office

21. SPS, as was noted previously, encountered considerable difficulty before obtaining the single independent claim of the Villo patent. Concerning the defendant's chances for success, a handwritten note from patent counsel to SPS' management written on the eve of the Patent Office Board of Appeals' Villo hearing provided: "No chance on process — practically none on product." SPS thus clearly was aware that, based upon the prior art known to and relied upon by the Patent Office, the Villo claims presented very close questions of patentability.

22. After review by the Patent Office Board of Appeals, the five Villo claims pertaining to the method of making the product were rejected, as was one product claim somewhat broader in scope than Claim 1 (see #20 above). Because they were abandoned by SPS, all of the rejected Villo claims, and their subject matter, passed into the public domain as a matter of law. Sakraida v. Ag Pro, Inc., 425 U.S. 273 (1976).

23. The Patent Office cited ten prior art patents of record during the prosecution of the Villo application, including several patents depicting the prior art pellet and strip-type bolts described earlier.[1] Although these latter patents disclosed a basic combination of nylon, secured to a bolt to make it self-locking, which functioned in the same way and attained the same result as the Villo product, SPS urged that such prior art was not relevant because, among other reasons: (a) it required either a "departure from normal thread structure" or a "recess or cavity in the thread structure;" (b) such combinations resulted only in "premium" (i.e. expensive) fasteners; (c) the nylon was held in place "by mechanical interlock with the thread structure;" and (d) "in every application of nylon to threaded elements ... prior to the applicant's invention, the application had involved a departure from normal thread structure." SPS further represented that pellet-type bolts had "never gained wide commercial use," and that they were "non-competitive" because of their "high cost," while at the same time stating that the Villo patch bolt was "extremely effective and highly commercial."

---

1. Although SPS did not cite any prior art to the Patent Office, it is clear from the record that the defendant made several independent prior art searches with respect to the Villo subject matter. These searches resulted in the discovery of fifty-nine prior art patents, including several patents which were arguably more relevant than those known to the patent examiner.

Based upon these representations, the patent examiner next turned to a British patent; a patent which did not have a modified thread form, but which SPS discounted as not relevant because it "disclose[d] the use of a rubber or rubber-like material," not the nylon of Villo. This distinction was significant, SPS claimed, because rubber did not fuse readily to standard bolt threads. Also, SPS argued, "the history of the development of the nylon thread lock indicate[d] clearly that the disclosure of this patent was not considered to offer any significant contribution to the nylon thread lock art."

The patent examiner also acceded to these arguments of SPS, but ultimately rejected the Villo claims based primarily upon a Gill patent viewed in conjunction with a Brubaker patent, both of which depicted the nylon which was missing from the aforementioned British patent. In its appeal from that ruling, SPS represented to the Patent Office Appeals Board that the Brubaker patent, because it showed only a particular method for applying nylon cladding to a preheated metal plate, did not relate to self-locking fasteners. In respect to the Gill patent, which showed only a tire valve having a nylon material overlying the threaded valve stem, SPS represented that: (a) Gill "does not contemplate utilizing the thin nylon coating for the purpose of a thread lock;" (b) "the device of Gill is interested solely in obtaining an airtight seal between stem 22 and rivet member 21;" (c) "the entire length of the threads" of Gill are "covered so as to be airtight;" (d) Gill does not "suggest the depth [of coating] sufficient to interfere with the mating of the thread" essential to create a self-locking effect; (e) "nowhere in the Gill patent can there be found a statement that the nylon is fused, bonded or otherwise integrated with the threaded members," and (f) "the nylon precoating could accordingly be in the nature of a sleeve" that could be slide-fitted over the valve stem. SPS, in conclusion, argued that "Gill [was] entirely different in purpose, construction and results" from the Villo invention.

24. The Patent Office Appeals Board, in reversing the patent examiner's rejection of Villo claim 1, expressly relied upon SPS' representation that "the strength of [the Villo] fusion bond permits a local application of the nylon material to the thread without requiring other means for retaining the nylon and thus results in a simpler and less expensive product."

25. SPS' technical expert, Mr. Donald Fischer, acknowledged at trial that, in the patent examiner's final rejection of the Villo claims, the Gill and Brubaker patents were cited as the best prior art known to the Patent Office. He further conceded both that neither of those patents disclosed a self-locking fastener, and that the disclosure of Gill and the secondary Brubaker reference were as limited in their teaching as has been outlined above.

V. THE ACCUSED USM PRODUCTS

26. SPS has asserted that six variants of a USM patch bolt come within the compass of the claims of the Villo patent. All of the accused bolts are made from the same constituent materials, and produced by the same processing steps. It is only the dimensions of the surface area covered by the patch (axial length and circumferential arc) that varies between the individual bolts.

27. The USM patch is formed on a conventional, clean bolt by use of a finely powdered mixture of plastic material composed of about 90% (by weight) nylon powder, known as nylon 11, and 10% (by weight) of another finely powdered material, known generally as an epoxy primer. This material is applied to the bolts by a particular USM process procedure. In simplified terms, the USM process involves first pre-heating the bolts to a temperature exceeding the melting point of the material mixture, then moving them along on a conveyor past a "spray station," where an air stream carrying entrained particles of the nylon-epoxy mixture is directed at the hot bolts. Those particles in the air

stream that strike the bolt melt and adhere to the threaded surface, and progressively build-up a layer of melted material on the bolt.

As the coated bolts move beyond the spray station, they gradually cool and the plastic material solidifies into an adherent coating. A relatively thick layer of material is formed on the surface portion of the bolt squarely facing the spray, while the coating gradually tapers in thickness to the thin, irregular edge contours on either side of this mounded center portion. The irregular edge contours of the USM patches are readily distinguishable from the sharply defined edges of the SPS bolts, which are formed by the confining effect of the Villo die.

The epoxy primer in the USM process forms a highly adhesive layer on the bolt surface, which serves to secure the overlying nylon layer to the bolt. Under the USM process, two distinct fused junctures in reality are formed — the bolt and the nylon-epoxy layers. This is in contrast to the single juncture disclosed in the Villo patent. Also no meaningful pressure is used to form the USM patch, again in contrast to the teachings of the Villo patent.

The above-described USM process is a simplification of the process used by the plaintiff at the time of the earlier [1969] suit. The epoxy and nylon powders were applied in successive airspray steps at that time, but formed the same two-layer coating on the subject bolt.

28. Despite the aforementioned distinctions between the USM patch bolts and the single patch bolt disclosed in the Villo patent, it is SPS' position that these USM products are within the umbra of the Villo patent monopoly. In this regard, the 1971 consent decree provides in pertinent part that "the claims of the Villo patent cover, inter alia, the so-called "Nylok" self-locking fasteners heretofore sold by defendant in which the self-locking feature is provided by applying

a powdered nylon composition to the undistorted thread surfaces of a heated bolt, regardless of whether extrinsic mechanical pressure is applied to the nylon composition and regardless of whether a primer material is applied to the thread surfaces prior to or concurrently with the application of the nylon composition." Because SPS has attributed such a broad scope to its Villo patent claim, however, the prior art and the related facts which form the basis of USM's allegations of fraud on the Patent Office and fraud on the court must be judged with reference to that same broad claim, and not with respect to some narrower or alternative construction of the claim which might be sufficient to allow for a defense to USM's allegations. See White v. Dunbar, 119 U.S. 47, 51 (1886) (a patent claim is not "like a nose of wax which may be turned and twisted in any direction").

VI. THE EVIDENCE SUPPORTING USM'S CLAIM THAT SPS' CONDUCT CONSTITUTED FRAUD ON THE PATENT OFFICE

A. Synopsis of USM's Contentions

29. USM has contended in the matter at bar that SPS, in prosecuting its Villo patent application, knowingly withheld from the Patent Office prior art and material facts more pertinent to the patentability of the Villo patent claim than those already known by the patent examiners. In addition, USM argues that SPS made affirmative misrepresentations of material fact to the Patent Office, with respect both to the state of the prior art and to other matters pertinent to patentability, upon which the Patent Office relied to its detriment in issuing the Villo patent.

USM urges that SPS' acts before the Patent Office constitued a breach of that uncompromising legal duty owed by the defendant to the Patent Office, and indirectly to the public, and further contends that but for each such act on the part of SPS the Villo patent never would have issued. Even more pointedly, USM charges that the very features of the Villo claim which

SPS successfully argued not to be disclosed by the prior art known to the Patent Office were in fact shown by the prior art known to SPS, but withheld by it from the patent examiners. This latter charge is, by definition, fraud in one of its most serious forms. Timely Products Corp. v. Arron, 523 F.2d 288 (2d Cir. 1975); University of Illinois Foundation v. Blonder-Tongue Lab., Inc., 422, F.2d 769, 777 (7th Cir. 1970).

30. USM's claims of patent fraud are built on the following factual foundation: (a) the 1954 Villo application which SPS concedes was deliberately abandoned following the Patent Office's initial rejection of all of its claims as unpatentable over a Parker patent; (b) that evidence of record which USM contends establishes a 35 U.S.C. §102(c) abandonment, by January, 1955, of a critical portion, if not all, of the claimed subject matter of the Villo patent — thus precluding, as a matter of law, any later recapture of this subject matter in the Villo patent; (c) the disclosure of the Parker patent, as it was known to SPS, in light of the asserted SPS admissions embodied in the disclosure of the 1954 application and in a related internal SPS memorandum; (d) SPS' asserted admissions of at least partial inoperability of the Villo patent, said by USM to be embodied in the Patent Office file history of another SPS patent (the "Epstein" patent) and in related internal SPS documents; and (e) that evidence of record which, USM argues, demonstrates that SPS made misrepresentations of material fact to the Patent Office on matters relevant to patentability, including those pertaining to the alleged commercial success of the Villo invention and the alleged lack of commercial acceptance of prior art self-locking bolts.

B. The Competence and Relative Credibility of the Witnesses on the Contested Issues of Fact

31. In respect to SPS' alleged fraud upon the Patent Office, the controversy between the parties centers essentially upon what was in fact disclosed by

the Parker patent, the abandoned 1954 Villo application, the Epstein patent history, and the related events at SPS in respect of each of these items. As might be expected, the parties are at odds on these issues.

The first aspect of this controversy was presented at the inception of the trial, when USM sought to have its expert witness, Mr. Albert Newton, a now retired USM engineer, explain the relevant technology, including the disclosures of the Parker and Epstein patents and the 1954 Villo application. SPS objected to this testimony on the ground that Mr. Newton was versed in adhesive technology, not simply in self-locking fasteners — which, SPS argued, was the only relevant technology. In this regard, SPS, while conceding that Mr. Newton was an adhesives expert, contended that a person versed in the self-locking fastener art in 1954 would have been ignorant of adhesive technology. Such a person, the defendant argued, in 1953 would have been lacking in any formal education beyond high school, would have "come up through the shop" and would have had no knowledge or understanding of the properties of plastics and adhesives such as were then known and described in the prior art literature.

By contrast, USM claimed that the alleged invention of the Villo patent pertained precisely to the field of plastics and to the adhering of plastics to metals. USM supported its argument by directing attention to the state of the prior art at the time the alleged Villo invention was made. Such prior art showed a combination of nylon mechanically secured to a bolt to form a self-locking bolt; a bolt which functioned identically to and achieved the identical result as the Villo product. The prior art further disclosed processes for adhering soft metals and plastics to fastener threads, for use in the production of like functioning patch bolts.

The record also reveals that SPS began its patch bolt development work with actual knowledge that patch fasteners *per se* were old, and that nylon was at least one preferred plastic for use in self-locking fastener

applications. SPS' express project objectives at the time it initiated its efforts in August, 1953 were to find suitable plastic materials, and to develop suitable methods for making self-locking bolts by adhering the plastic to the unmodified threads of bolts. In connection with these objectives, SPS in 1953 did substantial experimental work in the testing of various plastics for such application, and consulted prominent, knowledgeable plastics suppliers — including DuPont — in its search for suitable plastics and application methods.

From the evidence, it thus is clear that SPS itself recognized its own development work as being in the fields of plastics and adhesion of plastics to metals. Under this state of knowledge, both at SPS and in the prior art generally, common sense mandates that these fields be considered the technical arts to which the subject matter of the alleged Villo invention "pertains." 35 U.S.C. §103.

32. As the court has concluded that USM's definition of the technical arts pertinent to the claimed invention of the Villo patent is the correct one, and as the plaintiff's expert, Albert Newton, clearly is qualified as an expert in these technical arts, he must be considered competent to offer opinions on interpretation of the prior art and on the level of ordinary skill in these arts at the time of the alleged Villo invention.

33. In making its determinations, the court also has had the benefit of hearing the live testimony of the parties' witnesses and of observing their demeanor. In this regard, the court found Mr. Newton to be a highly credible and convincing witness. Until his retirement in 1976, Mr. Newton had worked continuously in the fields of plastics and plastic adhesives for more than thirty-five years. He had been aware of and had used self-locking bolts prior to 1954. He also was, prior to 1954, a reader of publications of the kind relied upon by USM as illustrating the level of prior art knowledge in the plastics and adhesives fields at that time.

In contrast, Mr. Don Fischer, SPS' technical expert, has had no working experience or educational expertise in the field of adhesive technology. As to this point, he conceded at trial that he had never represented himself as being an expert in chemical matters, and he declined to represent himself as being so qualified in this case. Indeed, on cross-examination SPS' own counsel objected to any interrogation of Mr. Fischer regarding the disclosures in prior art relied upon by USM on the ground that "this witness has not been put on and qualified as a man in the plastics art." Mr. Fischer himself then admitted that "I have no skill in the chemistry of plastic."

34. USM also offered expert testimony on those matters of Patent Office practice and procedure relevant to the issues in this case. This testimony was given by Irving Kayton, a Professor of Law and Director of the Patent Law Program at the George Washington University School of Law. Professor Kayton clearly has the credentials of an expert in his field, and SPS did not object to his testimony in this regard.

In explaining the practices and procedures pertinent to patents, Professor Kayton also offered opinion testimony which was directly relevant to the facts of this case, but in so doing he emphasized that he was relying upon the factual correctness of testimony given by Mr. Newton and others — testimony often phrased by USM counsel as the premise to the question being posed — and upon the undisputed documentary evidence then of record. Remembering that these caveats are necessary conditions to the value of his testimony, the court nonetheless notes that Professor Kayton was emphatic and unequivocal in stating that the postulated facts, when viewed together with the undisputed facts of record, established a number of independent instances of fraud on the Patent Office.

35. By comparison, SPS offered some expert testimony on certain Patent Office practices, primarily in respect to the patent classification system, but did

not offer any significant opinion testimony in rebuttal to that offered by Professor Kayton. Nor was SPS able on cross-examination to diminish the force of Professor Kayton's opinions.

The SPS expert testimony on patent practice was given by Mr. Don D. Andrews, a now retired Patent Office official who served in a quasi-judicial capacity as a member of the Patent Office Appeals Board from 1961 through his retirement in 1973. Mr. Andrews was the author of the Appeals Board decision which reversed in part an earlier patent examiner's rejection of the Villo claim, and thereby resulted in the issuance of the Villo patent.[2]

Mr. Andrews also was called by USM at trial. Testifying as an adverse fact witness, he was interrogated as to whether any of the prior art and other facts relied upon by USM, and allegedly withheld by SPS, might have altered his decision. In this respect, Mr. Andrews' trial testimony concerning the obligations of patent applicants to the Patent Office, and in regard to reliance placed by the Patent Office on the candor of applicants, is in noticeable conflict with the less exacting standards suggested by SPS.

C. The Abandoned 1954 Villo Application

36. On January 4, 1954 SPS filed a patent application, Serial No. 401,939, in the name of Mr. Villo for "Thread Lock." This application was not for the Villo patent in suit, and neither its existence nor the

---

2. SPS' engagement of Mr. Andrews as its partisan expert in this case, and Mr. Andrews willing acceptance of such a role, has, because of Mr. Andrews personal, quasi-judicial responsibility as a public officer for the decision that resulted in issuance of the Villo patent, been the subject of substantial and continuing controversy between the parties.

contents of it were made of record during the Patent Office prosecution of the present Villo patent.

37. SPS contends that the 1954 Villo application, while obviously relating on its face to claimed inventions in patch fasteners and their methods of manufacture, is directed to a different invention than that disclosed and claimed in the present Villo patent. The defendant further states that the 1954 application, and its documented development history, had nothing whatever to do with the Villo patent, and accordingly that, for this reason, it [SPS] had no legal duty to call this application, its disclosure and/or the basis for its abandonment to the attention of the Patent Office. Resolution of this issue, however, will require review of the Patent Office prosecution history of the 1954 application, its developmental origins at SPS, its disclosures and its relationship, if any, to the Villo patent.

1. The Rise and Fall of the 1954 Application

38. From the record, it is clear that SPS began its original patch fastener development project in August, 1953, and that Messrs. Villo and Baumgartner were prime participants in it. The defendant appears to have pursued this project intensely through the end of 1953, and all of the patch fastener product structures and manufacturing methods it then believed to be patentable seem to have been captured within the compass of the disclosure and claims made in the 1954 Villo application.

39. On July 15, 1954, the Patent Office issued an Office Action rejecting all twenty of the Villo claims as unpatentable over a Parker patent now relied upon by USM to support its claim of fraud. This rejection was characterized by Professor Kayton as an anticipation rejection, i.e. one in which the cited prior art reference is said to disclose to one of ordinary skill in the art all of the essential aspects of the claimed

invention. The Office Action and cited Parker patent were forwarded to Mr. Baumgartner by SPS' outside patent counsel with the covering comment that "the Parker patent seems to be highly pertinent."

The Parker patent was not discovered by SPS in the prior art search it conducted prior to the filing of the 1954 Villo application. SPS' searcher did, however, discover another patent, also cited by the patent examiner (the Saylor patent, No. 2,507,892), which was located in the same Patent Office art class, 85-1C, as the Parker patent. Accordingly, because that occurred, it can reasonably be assumed that SPS' search attorney either overlooked the Parker patent despite its relevance, or that it was not in the Patent Office search files at the time of his search.

40. SPS did not routinely accept the assessment of the Parker patent set forth in the Office Action and reported by the defendant's patent counsel. This was so because, in Mr. Baumgartner's words, the application was "important to the company."

By interoffice memo, Mr. Baumgartner, then SPS' supervisor of product research, sought counsel from other members of SPS' technical staff regarding the relevance of the cited Parker patent to the Villo application. This memorandum was directed to Mr. Robert Sproat, then SPS' Chief Metallurgist and a holder of a Masters Degree in metallurgy, Mr. James MacDowall, SPS' superintendent of operations, and the named inventor, Mr. Villo. In said memorandum, Mr. Baumgartner's personal conclusions with respect to Parker, which he conceded also represented the advice of experienced patent counsel, were reported:

> This patent covers in general exactly what we were trying to do ... We might be able to go back on the basis of other materials, but I do not feel we would have much luck.

On the face of the Baumgartner memorandum is the handwritten instruction "Drop it," which SPS witnesses have conceded reflects both the corporation's concurrence with the conclusions stated therein and the joint decision of the above-named individuals to abandon the 1954 application as unpatentable over Parker.

41. The 1954 Villo application was in fact abandoned by SPS when the defendant failed to respond within the statutory time limit to the patent examiner's Office Action. The application became officially abandoned on January 15, 1955.

42. In his deposition, Mr. Baumgartner testified that, concurrently with the decision to abandon the 1954 Villo application, "we were told to drop the project," that such action ended the work at SPS "on that approach" and that his personal association with any patch bolt development activities likewise ended at that time. For this, and the other facts noted above, it thus appears clear that SPS, before abandoning the 1954 application, carefully weighed the disclosure of the Parker patent which had unexpectedly surfaced during the prosecution of that application, concurred in the patent examiner's conclusion that Parker fully anticipated all that was claimed or could have been claimed as invention therein and deliberately abandoned the application for that reason.

2. The History of the SPS Development Project Leading to the filing of the 1954 Villo Application

43. The details of the SPS project activities which led to the filing of the 1954 Villo application have been well developed in the record, both by testimony and through the introduction of contemporaneous SPS documents, including several letter communications from Mr. Baumgartner to SPS' outside patent counsel. A substantial portion of this developmental history, with the exception of that chapter which forms the basis for USM's claim of fraud

on the court, is embodied as well in the testimony given by Messrs. Villo and Baumgartner in the prior suit, and in the documentary exhibits marked of record during that prior trial.

44. The first document written in connection with the SPS patch-bolt project begun in August, 1953 was a letter from Mr. Villo to SPS' patent counsel dated August 6, 1953. This letter, which had enclosed sample patch bolts made using "a liquid Neoprene rubber compound," made reference to "some experimenting with liquid nylon." In his testimony at the 1971 trial, Mr. Villo explained that the above letter referenced "our first attempt of the patch-type fasteners" in which we used neoprene, "a synthetic rubber compound." He testified that in making these neoprene patch bolts "I melted the neoprene; and had it drop onto the bolt through a little vessel," and we "found it had good adherence and gave us a certain amount of torque."

45. An August 10, 1953 document signed by Mr. Villo and witnessed by four co-signers was prepared for the purpose of having a "record of what we were doing." This document discussed the use of "other synthetics beside neoprene," and noted that Villo had "conducted further tests on the bolts and checked the torque on them." In Mr. Villo's words, the first formally recorded tests, attached to an August 11, 1953 letter to patent counsel, were a "fairly satisfactory start," that "we continued testing much more diligently because [our experiments] showed great promise," that by early November, 1953, he had "conducted a very thorough test on at least twenty-two or twenty-three different synthetic materials including nylon" and that "nylon showed more stable results than any of them."

Mr. Villo's written accounts concerning nylon patch bolts also parallel his earlier description of how he made neoprene patch bolts in August, 1953:

> Q Now, how was the nylon applied? Was it a patch only, or was it

completely around the circumference?

A This was in patch, sir. This was in patch.

Q Well, how was the patch actually applied, the patch of nylon applied to the bolt?

A In this case, a bolt was heated and a nylon rod was advanced against the threads and a certain amount of nylon melted onto the threads.

Q And how did you view those test results on those nylon samples?

A The nylon showed the best promise of the various materials tested.

SPS contends that Mr. Villo, who died prior to the filing of the present action by USM, erred when he gave the above testimony in the 1971 trial. The defendant claims that no SPS patch bolts were made by melting, or fusing, nylon onto the bolt threads until over one year later, in December, 1954. Rather, SPS states only "liquid," not melted, nylon was used in 1953.

In the aforementioned August 6, 1953 letter, however, although "liquid neoprene" is discussed, such was said by Mr. Villo to mean melting the neoprene. Also, SPS has not charged that the Villo testimony with respect to melting neoprene onto the bolt threads in August, 1953 was in error.

46. In a letter dated November 10, 1953, Mr. Baumgartner forwarded to SPS' patent counsel the test results on "twenty-two or twenty-three different synthetic materials," and an "Outline for Patent

Application" which was the initial draft of the 1954 Villo patent application.

47. When asked the nature of the development described in the Outline for which SPS had asked patent counsel to obtain protection, Mr. Baumgartner replied:

> It was my understanding that what was unique was the application of a resilient coating to metallic threads where there would be a bond between the two not requiring any deformation or machining of the metallic threads.

Baumgartner further testified that it was SPS' intention to embrace within this new concept limited axial and both complete and partial circumferential coatings, the use of nylon, among other materials, and the use of nylon with an epoxy primer to secure the nylon to the threads. In describing the 1953 development work, Mr. Baumgartner testified that mixing an adhesive such as epoxy with a plastic such as nylon was then known by SPS to be an equivalent alternative to applying the adhesive and the plastic to the bolt in separate processing steps.

The application "Outline," as embellished by the defendant's patent counsel working in conjunction with Mr. Baumgartner and others at SPS, ultimately matured into the 1954 Villo application. This 1954 application, in the words of Mr. Baumgartner, was intended to disclose not only what SPS had accomplished in its tests as of that time, but also "where [we envisioned] we might be in our development work at such time as this would have issued as a patent." Continuing, he stated that: "I think the intent of our wording was to make it as broad a coverage as possible."

3. The Disclosure of the 1954 Villo Application

48. In many respects, the 1954 Villo application clearly disclosed to one of ordinary skill in the art in 1954 the very patch bolt product broadly claimed in the later issued Villo patent. The differences between the disclosures of the 1954 Villo application and the Villo patent, with the exceptions considered in findings 56 and 57, infra, are primarily in the method for making the claimed product. SPS' own patent expert, Mr. Fischer, however, has conceded that the Villo patent claims purport to cover a patch bolt product regardless of manufacturing method, so long as such method is productive of a fused juncture between the plastic and metal. The broad language of the 1971 consent decree also confirms this conclusion.

49. The 1954 Villo application also disclosed that neoprene rubber was suitable for use in patch bolt applications. This representation, which was made under oath by Mr. Villo at the time of the filing of the 1954 application, was contradicted in part by the representations SPS made later to the Patent Office, during its prosecution of the Villo patent. The 1954 application further disclosed, again under the cover of Mr. Villo's oath as an inventor, that Villo had found that nylon and the co-polymers of vinyl chloride and vinyl acetate, when applied to the unmodified threads of a bolt, not only gave a locking action, but also functioned as alternatives suitable for commercial purposes. Vinyl acetate is essentially the same type of material disclosed by the Parker patent.

50. SPS has advanced a number of arguments in its efforts to minimize the significance of the above-noted facts. Specifically, SPS has argued that the 1954 application: (a) did not disclose or claim fusion bonding because the particular words "fused juncture" were not found in the application; (b) disclosed only a full circumferential coating; (c) disclosed only an application of plastic in a liquid or paste state, rather than in a

solid form; and (d) did not state that vinyl acetate was the full equal of nylon for a self-locking application. The court, however, has not found any of these arguments convincing. On the subject of the 1954 application the court believes that the testimony of SPS' witnesses generally was unconvincing and, more often than not, was contrary to the specific contentions made by the defendant.

51. Regarding the defendant's "fused juncture" argument, although SPS has always taken the position that a fused juncture is disclosed in the 1956 Villo application, this expression was not used by SPS until a continuation-in-part Villo application was filed in November, 1957. From there, it apparently found its way into the claims as a simple way to describe the product disclosed in the 1956 application. As to this point, Mr. Sproat, now the Vice-President of Manufacturing and Engineering for SPS, admitted that fusion is simply a synonym for melting and that fusion bonding is the juncture or "bond that's created by heating one of two materials above its melting point and placing them in contact."

52. In respect to SPS' "full circumferential coating" argument, Mr. Newton testified that, although the drawing of the 1954 application illustrated a full circumferential coating, one of ordinary skill in 1954 would have, without question, also understood the application to disclose a partial circumferential coating. The wording of the 1954 application, i.e. "the extent of the thread area covered by the film may vary with the degree of locking action required," also makes it clear that the area to be covered is simply a matter of choice. Mr. Baumgartner, in addition, testified that he viewed the 1954 application as embracing both partial and complete circumferential coatings. Finally, Mr. Andrews testified both that he considered this issue so insignificant that he would have taken "judicial notice" of the obviousness of using less than a full circumferential coating, and that the 1963 Appeals Board decision resulting in issuance of the Villo patent

so held — "the area circumscribed is a matter for routine determination."

53. SPS' argument concerning the form or state of the plastic as initially applied to the bolt is a distinction without a difference where it is the end product and not the particular method being claimed. This is true because plastic in its end condition is in the same solid state in the products made according to the 1954 application, the Villo patent and the accused USM process. In each case the plastic has gone through the same melted or fused state enroute to the final product condition.

The only difference between these three method techniques is whether the starting material is in liquid, paste, powder or solid form, and whether the material is applied by spraying, brushing, etc. or by a pressure applying die. The Villo claims, rather than drawing any distinction based on these method concepts, require only that there be a fusing of the plastic. Mr. Fischer conceded that various methods may be employed to attain fusing consistent with the Villo claims, and the 1971 consent decree embraces a product with a fused juncture regardless of other method aspects of manufacture.

54. SPS sought to show at trial that the vinyl acetates, polyvinyl chlorides and other materials recited in the 1954 Villo application as being suitable for "commercial" thread locking applications were not as good as nylon for such use. Particularly, SPS sought to show that nylon was better suited because of its superior resiliency and the like for demanding commercial applications, like those of the aerospace industry, while presumably the other materials were only acceptable for less demanding commercial applications.

There are a number of independent reasons, factual and legal, why this argument fails. First and foremost, however, is that SPS recognized in September, 1954,

upon review of the patent examiner's rejection of the 1954 Villo application, that there was little or no difference of a patentable consequence between nylon and the vinyl acetate disclosed in the Parker patent. Although SPS considered the 1954 application "important to the company" and had the rejection studied by at least five skilled people, it reached the conclusion that Parker disclosed "exactly what we are trying to do."

4. A Comparison of the 1954 Villo Application and the Villo Patent

55. USM submitted a chart at trial comparing the wording of the invention summary and invention objectives portions of the specifications of the Villo patent and the 1954 Villo application. This chart revealed some startling similarities and distinctions between the documents. Specifically, the chart showed that there were twenty-seven different phrases of identical wording between the specifications of the two documents, including phrases of up to thirty-seven words in length, and other phrases of twenty-nine, twenty-seven, twenty-two and twenty words in length. It is evident that this did not occur through coincidence. Rather, it is apparent that the author of the application for the Villo patent had at least reviewed the 1954 application before he drafted the former document.

56. The word identities also show that the alleged inventions of the Villo patent and the 1954 Villo application were based in large part upon the same "discovery," and that the objects of both inventions were very similar. There are, however, two distinctions which warrant discussion by the court. First, in specifying the plastic materials that conform to the like "discovery" and objects, and which were said by Mr. Villo to meet the requirements for providing a thread lock adequate for commercial purposes, the specifications state:

THE VILLO PATENT	THE ABANDONED 1954 VILLO APPLICATIONS
One material which meets the essential requirements and which when properly applied to a screw thread will provide a thread lock adequate for commercial purposes is polyamide [nylon type] resins.	The following are samples of typical materials meeting the foregoing requirements in whole or in substantial part and which when properly applied to a screw thread will yield a thread locking film adequate for commercial purposes.

The examples of typical plastic materials specified in the abandoned Villo application include nylon, the copolymers of vinyl chloride, vinyl acetate and neoprene mixed with a polyvinyl material. Only nylon is identified in the Villo patent as a material meeting the requirements adequate for a commercial thread lock. SPS thus, in preparing the application for the Villo patent, appears to have deleted reference to those other plastic materials, in addition to nylon, that its own research work had demonstrated also produced "a thread lock adequate for commercial purposes," and which Mr. Villo had represented under oath to meet such requirements.

57. The second distinction relates to the manner of adhering the plastic to the thread surfaces of the bolt, described in the respective Villo specifications as follows:

THE VILLO PATENT	THE ABANDONDED 1954 VILLO APPLICATION
... the ability to adhere or bond strongly to the surface of the threads ... <u>without the use of any bonding or adhesive agent</u>	[the] ability to adhere or bond strongly to the surface of the threads ... <u>by suitable bonding or adhesive agents</u>

It is apparent from the above quotes, when read in light of the other phrase identities, that the author of the application for the Villo patent consciously and deliberately changed the wording of the 1954 Villo application to exclude the use of bonding agents and adhesives from the disclosure and claims of the Villo patent. This aspect of the Villo patent also is emphasized as another facet of the Villo invention "discovery:" "I have discovered that these resins [nylon type] may be adhered to the threaded surface of a bolt without use of any bonding or adhesive agent."

The Patent Office file history of SPS' Epstein patent further confirms that SPS intended and understood the teaching of the Villo patent to be so limited. Specifically, only fifty-five days before SPS filed its first [the 1969] action against USM for infringement of the Villo patent, the defendant made the following representation to the Patent Office in the course of its successful effort to overcome a rejection of the Epstein claims on the Villo patent:

> The Villo patent in Column 1, lines 44 et seq. teaches that nylon resins may be adhered to the thread surface of a bolt without the use of any bonding or adhesive agent. In view of this teaching, there is no incentive to one skilled in the art to employ an adhesive like that shown in the Groves, et al. reference to bond a thermoplastic element to a metal fastener.
>
> * * * * *
>
> However, it is continually emphasized in the Villo patent that the locking elements therein are applied without the use of any adhesives, and are bonded to the fastener

surface solely by a fused juncture. (emphasis in original.)[3]

58. After the Patent Office, in its first Office Action [rejection] of the 1956 Villo application, failed to cite as prior art the Parker patent that had spelled the downfall of the 1954 Villo application, it appears that SPS' claims in the application for the Villo patent were gradually expanded and tailored to meet and defeat the rejections of the Patent Office on the prior art actually cited. USM contends that the expanded claims of the Villo patent literally read on and found support in the 1954 application. Mr. Newton and Mr. Sproat also testified to this effect, as did Mr. Baumgartner — excepting for his reticence at trial to find one element, fusion bonding, in the 1954 application. SPS' expert, Mr. Fischer, declined to answer questions on this subject on the ground that he had no skill in the chemistry of plastics. Professor Kayton, however, on the basis of the interpretation of the 1954 application given by Messrs. Newton and Sproat, was unequivocal in stating that the Villo patent claims read and "found support" in the 1954 Villo application.

From the testimony presented, the court thus concludes that the 1956 Villo patent claims did read on and find support in the disclosures of the 1954 Villo application.

D. The Disclosure of the Parker Patent as Known to SPS

59. The SPS documents produced, and the testimony of several of the defendant's present and

---

3. Although the first application for the Epstein patent was filed in March, 1965, the patent did not issue until June, 1973. Accordingly, it was not until this latter date that the prosecution history of the Epstein patent, wherein the above quoted statements were contained, became available to the public.

former officials, together show a clear recognition by SPS that the Parker patent anticipated "exactly" what it [SPS] was trying to patent in the 1954 Villo application. Having already determined what the 1954 application disclosed, and that the claims of the Villo patent found support in the 1954 application disclosure, it appears to this court to follow a fortiori that the same conclusion reached in 58 above applies equally to the 1956 Villo claims, as measured against the Parker patent.

SPS, however, has urged strenuously both prior to and at trial that Parker did not in fact disclose fusion bonding, and that such would not result from an explicit following of the teachings of Parker. USM, in response to this argument, proposed to conduct inter partes tests for the purpose of scientifically establishing as a matter of fact whether a following of the explicit teachings of Parker would or would not result in fusion, i.e. the melting of the polyvinyl acetate. USM requested that SPS have it expert witnesses, Messrs. Andrews and Fischer, attend these tests, which were to be conducted by USM's expert witness, Mr. Newton. SPS declined to have either of these individuals attend the tests, but send in their stead Mr. John Benz, SPS' Manager of Chemical Research and Development.

At trial, Mr. Newton testified to the effect that the inter partes tests had shown conclusively that the Parker procedures resulted in fusion bonding. SPS did not offer any testimony through Mr. Benz criticizing in any respect the accuracy or fairness of the USM tests. Accordingly, from the evidence, including the inter partes tests, it must be assumed that a practice of the explicit teachings of the Parker patent would result in a fusion bonding of vinyl acetate to the bolts.

60. The final question is whether SPS can be charged with knowledge that Parker disclosed fusion bonding. Mr. Newton testified that, in his opinion, one of ordinary skill in the field reading the Parker patent as of 1954 or earlier would have understood the patent

to disclose a fusion bonding of vinyl acetate to the threads. There also is substantial objective evidence to corroborate Mr. Newton's opinion. In this regard, SPS had itself used polyvinyl acetate as of November, 1953 to make patch bolts, and Mr. Baumgartner's "Outline" for the 1954 application specifies "heat curing at about 300°F. for the vinyl acetate. Vinyl acetate melts at about 225°F., and Mr. Baumgartner testified that from his own recollection he knew polyvinyl acetate to melt "in the neighborhood of two hundred and fifty, three hundred degrees Fahrenheit."

The Parker patent instructs that the vinyl acetate is to be placed on the bolt in liquid form and the volatile solvent evaporated by air drying the bolt, after which the bolts are to be "baked at a temperature of, for example, 450 to 500 degrees F. in order to set the coating, for a time of five minutes for small parts and ten minutes for larger parts." The Villo patent, by comparison, directs a heating of the bolt to a temperature of 450°F. for nylon material stated in the patent to have a melting point of from 405°F.-425°F. SPS represented that the nylon fused to the bolt under such conditions. Assuming SPS knew this to be the case at the time it filed the 1956 Villo application, this court believes that the defendant's engineers must have been technically proficient enough at that time to recognize that fusion bonding was disclosed by the Parker patent. That being true, the court accordingly finds that SPS knew, or clearly should have known as of 1954, and in any event prior to issuance of the Villo patent in June, 1963, that the Parker patent disclosed a fusion bonding of vinyl acetate to the bolt threads.

E. The Revelations of the Epstein Patent File History and the Related SPS Development Activities

61. Approximately two years after the parties herein entered into their 1971 consent decree, a United States Patent, No. 3,737,355, was issued in the names of Messrs. Michael Epstein and Charles Cooper, both

employees of the Battelle Memorial Institute, a not-for-profit research organization located in Columbus, Ohio. This patent, which had been assigned on its face to SPS, was the progeny of the third of a series of continuing patent applications first filed in the Patent Office by SPS on March 4, 1965. The issuance of this patent on June 5, 1973, more than eight years after its filing, laid open to public inspection for the first time the prosecution history of the "Epstein" patent.

62. The Epstein patent disclosed and claimed an invention a patch-bolt product similar to that described in the Villo patent, the only exception being that the pellet of Epstein was comprised of a two-layer laminate. The first or outer layer of the Epstein pellet was composed of nylon, while the inner layer contacting the bolt threads was composed of a nylon-epoxy mixture bearing the trade name "FM-1000."

63. In its ultimately successful effort to convince the Patent Office that the use of an adhesive intermediate between the outer nylon layer and the bolt threads constituted a patentable invention over its own Villo patent, SPS represented to the Patent Office that:

> Unfortunately the engineering thermoplastics [nylon et al.] cannot be directly bonded to metal surfaces with sufficient strength to withstand the peculiar combination of forces that act upon loaded fastener systems.

This categorical representation was moderated, but only slightly, by further statements in the Epstein application:

> In some instances, the engineering thermoplastics can be satisfactorily affixed to certain metals if the surface is given special chemical or physical pretreatments to make a highly porous surface. However,

such operations are expensive and impractical.

* * * * *

> Nylon alone cannot be bonded directly to such substrates [carbon steel, stainless steel, oxide coated steel or cadmium plated steel] with a satisfactory bond strength to withstand the complex forces to which loaded fasteners are subjected.

64. By contract, SPS represented to the Patent Office during its prosecution of the Villo patent that "nylon material of this type may be bonded to the thread surfaces with a strong enough bond so that it will not be separated from the thread surfaces when the material is distorted by extremely high pressures." SPS repeated these representations during the prosecution of the Villo patent as an argued basis for the patentability of the claimed Villo invention, and the Patent Appeals Board decision written by Mr. Andrews expressly relied upon such representations in reversing in part the patent examiner's rejection of the Villo claims:

> The strength of the appellant's fusion bond permits a local application of the nylon material to the thread without requiring other means for retaining the nylon and thus results in a simpler and less expensive product than in the Gill patent.

65. The above-quoted representations of SPS, made in the course of the defendant's Villo and Epstein patent prosecutions, clearly are contradictory. As to this point, the evidence supports the conclusion that the representations made by SPS in its prosecution of the Villo patent were untrue, and that SPS knew or reasonably should have known such to be the case at the time said representations were made.

66. SPS, although having initiated its patch fastener project in August, 1953 and purportedly reduced to practice the Villo subject matter as early as December, 1954, did not begin commercial sales of patch fastener products of any kind until early 1966.[4] The defendant, through the testimony of Mr. Sproat at trial, attributed this ten to twelve year delay in commercialization of the Villo patch bolts to purely a "business decision." This testimony of Mr. Sproat, however, was contradicted significantly by the testimony of one former and two present SPS employees, Messrs. Waeltz, McCullough and Hall, the latter individual now being in the employ of a British subsidiary of USM. Many of the contemporary SPS documents of record likewise contradict the testimony of Mr. Sproat, and further corroborate that of Messrs. Waeltz, McCullough and Hall.

67. The evidence further establishes that SPS worked with varying levels of diligence for more than ten years in attempting to make reliable patch bolts according to the teachings of the Villo patent, and consistently failed. The defendant, the record shows, was near abandoning its efforts when it decided in 1964 to engage the Battelle Memorial Institute, and specifically Messrs. Epstein and Cooper. The Battelle work was commissioned by Mr. Robert Sproat, now the SPS Vice-President of Research and Engineering, who in 1954 concurred in the recommendation that the 1954 Villo application be abandoned for unpatentability over the Parker patent.

68. In their work, Messrs. Epstein and Cooper focused upon what SPS apparently believed was an

---

4. SPS did represent at trial that an isolated sale of patch bolts was made to the federal government in 1957, in the amount of $131.20. There was, however, no evidence presented regarding the nature of the patch construction in these products, or as to whether the products proved operative.

insurmountable problem: the nylon pellets of Villo could not be made to reliably adhere to the bolts so as to effect a satisfactory product. The Battelle solution was the laminated pellet of the Epstein patent. The basic idea of using an intermediate epoxy adhesive, albeit not in a solid laminated pellet form, however, appears to have been the very approach abandoned by SPS in July, 1954, with the abandonment of the first Villo application.

69. As to the viability of the Villo product, in or about 1966, at a time when SPS' competitors had already introduced patch bolt products into the market place, Mr. Hall made inquiry of Mr. Sproat as to why SPS had delayed its commercial introduction of patch bolts for so many years. Regarding Mr. Sproat's response, Mr. Hall testified:

> Mr. Sproat's answer to my question was to the effect that Loc-Wel [the Villo patch bolt] had not emerged previously because of difficulties in making it perform reliably and that they had prior to abandoning the exercise as a last shot referred the problem to Battelle Memorial Institute.

70. Similarly, Mr. Ronald Waeltz, the SPS product engineer who worked directly with Messrs. Epstein and Cooper, testified that he had a personal awareness of SPS' efforts to make the Villo product from 1958 onward. He admitted in his testimony that "there was a problem with the products," that this problem was "inconsistent fusion of the nylon," that because of this the products were not satisfactory, and that between 1958 and 1964 "there was a lot of work being done on it." In a project report compiled by Mr. Waeltz, it was observed that "considerable trouble was encountered with the poor adhesion of the Zytel 31 nylon to the screws." Mr. Waeltz also testified that it was this inconsistency in fusion of the nylon that precluded commercial manufacture of the Villo product.

VII. SPS' CONDUCT IN ITS PROSECUTION OF THE 1956 VILLO PATENT CONSTITUTED FRAUD ON THE PATENT OFFICE

71. For the reasons developed below, the court finds that the record in this case establishes, by clear and convincing evidence, that SPS, in its prosecution of the 1956 Villo patent: (a) breached its uncompromising duty of disclosure to the Patent Office; (b) deliberately withheld from the Patent Office prior art and material facts more pertinent to patentability than those then before the Patent Office; and (c) intentionally made affirmative misrepresentations of material fact to the Patent Office upon which the Patent Office relied to issue the Villo patent. The court further finds that, but for each such act of misconduct, the Villo patent would not have issued as it did.

A. The Applicable Legal Standards

72. As concerns this claim of the plaintiff, it is SPS' position that a finding of patent fraud cannot be sustained unless it is first determined that every recited feature of the Villo patent claim has been disclosed in a single prior art reference alleged to have been withheld from the Patent Office. Simply put, SPS contends that before USM's claim of patent fraud can properly be found to lie, the Villo claim must be found to have been fully anticipated by a single prior art reference under 35 U.S.C. §102. SPS further urges that anticipation can be found only where the prior art reference, within its four corners, literally and exactly discloses each and every element of the patent claims.

Addressing SPS' latter contention first, the Seventh Circuit has consistently held that lack of novelty under 35 U.S.C. §102(a) is established, notwithstanding an absence of total identity between patent claims and a single prior art patent, if the general aspects of the claims are the same and the difference in minor matters is only such as would suggest itself to one of ordinary skill in the art. Dole Valve

Co. v. Perfection Bar Equipment, Inc., 419 F.2d 968, 971 (7th Cir. 1969); Amphenol Corp. v. General Time Corp., 397 F.2d 431, 438 (7th Cir. 1968). Also, though, anticipatory prior art is not a sine qua non to a finding of fraud on the Patent Office. A patent applicant, the Supreme Court has held, has a substantially greater responsibility in his relations with the Patent Office than merely to disclose anticipatory prior art. Rather, the prospective privilege of a patent monopoly imposes upon the applicant an "uncompromising duty" of disclosure of all facts material to the prosecution, because there is a paramount public interest "in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope." The "public interest," not an arbitrary rule, demands that all such facts "be submitted to the Patent Office which then can pass upon the sufficiency of the evidence." Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co., 324 U.S. 806, 816-18 (1945). In Kingsland v. Dorsey, 338 U.S. 318, 319 (1949), the court required that applicants' attorneys likewise act with "the highest degree of candor and good faith" in representing parties before the Patent Office.

The Commissioner of Patents has correlated the duty of disclosure of the materiality of the withheld prior art as follows:

> the materiality of the prior art withheld need not necessarily be such that applicant or counsel believed it would render any of the claims unpatentable. It need only be such that the patent might not have issued had full disclosure been made. In re Altenpohl, 198 USPQ 289, 310 (Comr. Pats. 1976). See also In re Multidistrict Litigation Involving the Frost Patent, 398 F. Supp. 1353 (D. Del. 1975).

This duty has been codified by the Commissioner:

> A duty of candor and good faith toward the Patent and Trademark Office rests on the inventor, on each attorney or agent who prepared or prosecutes the application and on every other individual who is substantially involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application. All such individuals have a duty to disclose to the Office information they are aware of which is material to the examination of the application. 37 C.F.R. §1.56.

The above standard, which "codifies the existing [Patent Office] policy on fraud and inequitable conduct [and] is believed consistent with the prevailing case law in the Federal Court," 37 C.F.R. §1.56, paraphrases the relevant language of most of the applicable Supreme Court decisions and is consistent with the standards imposed by the federal courts generally. See In re Clark, 522 F.2d 623, 627 (CCPA 1975). Because that is true, as violations of C.F.R. §1.56, if discovered by the Commissioner prior to the issuance of a patent, are grounds for striking the patent application from the Patent Office files, it cannot reasonably be argued that violations of this §1.56 standard, if discovered by a federal court after a patent has issued and escaped the jurisdictional research of the Commissioner, should be treated less severely.

73. The §1.56 standard has been applied, in essence if not verbatim, by the Seventh Circuit Court of Appeals, University of Illinois Foundation v. Blonder-Tongue Lab., Inc., 422 F.2d 769, 777 (1970) ("The applicant's knowledge of a fact as to which he knows the patent office is ignorant or mistaken and which would be material under the theory he knows the patent office is applying would impose an obligation of

candor."); Armour and Company v. Swift & Company, 466 F.2d 767, 779 (7th Cir. 1972) ("the applicant has the burden of presenting the Examiner with a complete and accurate record to support the allowance of the letters patent."); Kearney & Trecker Corp. v. Giddings & Lewis, Inc., 452 F.2d 579, 591 (7th Cir. 1971), and by other courts in this district; Shelco, Inc. v. Dow Chemical Company, 322 F. Supp. 485, 516 (N.D. Ill. 1970), aff'd 466 F.2d 767 (7th Cir. 1972); Blaw-Knox Co. v. Barber-Greene Co., 176 USPQ 214 (N.D. Ill. 1972), aff'd without opinion, 180 USPQ 294 (7th Cir. 1973); Air-Shields, Inc. v. Air Reduction Co., 331 F. Supp. 673, 684 (N.D. Ill. 1971), aff'd without opinion, 474 F. 2d 1351 (7th Cir. 1973).

74. As to what may be material in a patent fraud analysis, the Court of Customs and Patent Appeals, in Norton v. Curtiss, 433 F.2d 779, 794-95 (CCPA 1970), emphasized that the concept of "materiality" as a condition for patent fraud "cannot be applied too narrowly if the relationship of confidence and trust between applicants and the Patent Office is to have any real meaning." In this regard, the Norton court specifically found that a "but for" test was too narrow a standard for patent fraud review, since under that standard the objective facts themselves would always result in a holding of patent invalidity, regardless of whether fraud also was shown.

75. Also relevant to the matter at bar is the CCPA's statement in Norton that:

> [we] subscribe to the recognition of a relationship of trust between the Patent Office and those wishing to avail themselves of the governmental grants which that agency has been given authority to issue. The ex parte prosecution and examination of a patent application must not be considered as an adversary proceeding and should be limited to the standards required in inter partes proceedings. With the seemingly ever-

> increasing number of applications before it, the Patent Office has a tremendous burden. While being a fact-finding as well as an adjudicatory agency, it is necessarily limited in the time permitted to ascertain the facts necessary to adjudge the patentable merits of each application. In addition, it has no testing facilities of its own. Clearly, it must rely on applicants for many of the facts upon which its decisions are based. The highest standards of honesty and candor on the part of applicants in presenting such facts to the office are thus necessary elements in a working patent system. We would go so far as to say they are essential. Id. at 793-94.

As to this point, Mr. Andrews' testimony shows that the burden on the Patent Appeals Board at the time of the Villo appeal was even greater than that normally on patent examiners. At the time, the Board had a five thousand case — or three and one-half year — backlog, and each three-man panel was hearing and disposing of cases at the rate of about thirty per month. Mr. Andrews estimated that, because of this backlog, he had only five or six hours available to read the entire Villo application, its prosecution history, the cited prior art of record, the appeal briefs, and the examiner's answer (about 155 pages); to attend the oral hearing and the Board conference; and to write his four-page opinion reversing in part the patent examiner. The situation was such, Mr. Andrews conceded, that the Patent Office "had to rely upon applicants for correct facts," and that it necessarily expected candor and truthfulness from an applicant as to any fact that might reasonably be expected to affect the question of patentability.

76. SPS, however, also urges that it cannot be found guilty of patent fraud, even if it failed to disclose fully anticipatory prior art to the Patent Office, unless it additionally is shown that such failure was done willfully and deliberately with an intent to deceive. As

regards this contention of the defendant, while it is true that some element of intent is necessary to a finding of patent fraud, in measuring the traditional element of "scienter" in this context due recognition also must be given to the fiduciary-like duty of a patent applicant to the Patent Office. Norton v. Curtiss, 433 F.2d 779, 795 (CCPA 1970). Because this duty exists, the threshold for a finding of fraud in patent cases is lower than what is required in ordinary arm's length of adversary transactions:

> Good faith and subjective intent, while they are to be considered, should not necessarily be made controlling. Under ordinary circumstances the fact of misrepresentation coupled with proof that the party making it had knowledge of its falsity is enough to warrant drawing the inference that there was a fraudulent intent. Where public policy demands a complete and accurate disclosure, it may suffice to show nothing more than that the misrepresentations were made in an atmosphere of gross negligence as to their truth. Norton v. Curtiss, Id. at 797-96 (Court's emphasis). See also In re Altenpohl, 198 U.S.P.Q., 315-17 (Comr. Pats. 1976); Beckman Instruments, Inc. v. Chemtronics, Inc., 439 F.2d 1369, 1379 (5th Cir. 1970).

Where a corporation has knowledge of facts or prior art that it has a duty to disclose to the Patent Office, it cannot escape responsibility for its nondisclosure simply because the particular official or attorney making the untrue communications was unaware of or says he was unaware of such information. In this context, knowledge of the corporation will be imputed to its responsible officials. Charles Pfizer & Co. v. FTC, 401 F.2d 574, 583 (6th Cir.), cert. denied, 394 U.S. 920 (1968).

The necessary element of wrongfulness, willfulness or bad faith will exist whenever "the applicant or counsel knew or clearly should have known of the relevance of [the] prior art." In re Altenpohl, 198 U.S.P.Q. 289, 319 (Comr. Pats. 1976). This element also "can be imputed from the facts existent or where relevant prior art is withheld through recklessness or gross negligence on the part of applicant or counsel." Id. See also Armour and Company v. Swift and Company, 466 F.2d 767 (7th Cir. 1972).

77. Where the facts relied upon to show fraud are embodied in a party's own patents and/or patent applications, the element of "deliberateness" can properly be presumed. As now Justic Stevens stated in CTS Corp. v. Piher Internat'l Corp., 527 F.2d 95, 99-100 (7th Cir. 1975):

> We must assume that the applicant deliberately decided not to call the Examiners attention to '478, since it was one of its own patents, cf. Armour & Company v. Swift & Company, 466 F.2d 767, 777-779 (7th Cir. 1972), and we are unwilling to assume that the Examiner was familiar with it, id. at 779.

Accordingly, SPS cannot under the facts presented meritoriously argue that its failure to disclose to the Patent Office the 1954 Villo application, and the Parker patent cited therein, was inadvertent or not deliberate.

B. SPS Fraudulently Withheld the Parker Patent and Critical Related Facts Known Only to It from the Patent Office During Its Prosecution of the Applications for the Villo Patent

78. The Parker patent, as read by one of ordinary skill in the art in 1954, disclosed in most respects the subject matter of the Villo patent claims, with the noteworthy exception of the word "nylon." SPS,

therefore, had repeatedly emphasized during its prosecution of the Villo patent that selection of a material having particular properties, as exemplified by nylon, was an essential aspect of the Villo invention, and had primarily upon this basis successfully persuaded the patent examiner to withdraw a rejection based upon a British patent showing a neoprene coating of threads.

79. If the patent examiner had been made aware of the Parker patent, together with the critical admissions embodied in the defendant's abandoned 1954 Villo application and SPS' internal "Drop it" memorandum — that nylon and polyvinyl acetate were reasonable alternatives in 1954 for use in commercial patch-bolt applications, and that the differences between these materials were not of patentable consequence — in all likelihood the Villo patent would not have issued as it did. As to this point, Professor Kayton testified that, upon Mr. Newton's interpretation of Parker in light of SPS' own internal documents, the Parker patent anticipated the Villo claims under 35 U.S.C. §102. Even SPS' own expert, Mr. Andrews, the man who, in reality, was primarily responsible for the issuance of the Villo patent, testified that he probably would not have allowed the Villo claims under such circumstances:

Q But if they were equivalent materials, that is polyvinyl acetate and nylon, for use on a self-locking fastener, that would affect your judgment with respect to the pertinence of the Parker patent to the claims of the Villo patent, right?

A If they were equivalent in all respects, this is true.

Q And the fact is you would not have allowed the Villo patent claims over the Parker patent, if you believed that polyvinyl acetate was an equivalent of nylon for a self-locking fastener, correct?

A If you say equivalent in all respects, that would be correct.

Q You should not allow the claims, have allowed it.

A I should not have allowed it.

Andrews against repeated this conclusion at a later point in his testimony:

Q Sir, let me again put to you an assumption with respect to the Parker patent.

If you assume that the Parker patent discloses to one of ordinary skill that the vinyl acetate is an equivalent of the nylon for purposes of a seif-locking fastener and that the vinyl acetate is fused to the threads then you would have rejected the claims of the Villo patent on the Parker patent by taking judicial notice of the obviousness of trying a coating less that 360 degrees. would you not?

A Yes sir, I think I would.

It was SPS' internal documents which provided the contemporary prior art knowledge that revealed the Parker patent to be an anticipatory reference to the Villo patent claims. That being true, SPS' withholding from the Patent Office of the Parker patent, together with these "missing links" of knowledge, constituted a clear breach of the defendant's duty of disclosure to the Patent Office.

80. The withholding by SPS of the Parker patent and aforementioned related facts can be presumed to have been deliberate, since this information was embodied in SPS' own abandoned 1954 Villo application file. This presumption, however, is not essential to a finding of fraud on the Patent Office in this case. This

is so because, from the evidence presented, it appears clear that SPS knew or should have known that Parker, as construed in light of its own research and development experiences and earlier Patent Office encounter with the Parker patent, anticipated the claimed subject matter of the Villo patent.

81. SPS has made two arguments in support of its contention that it committed no fraud on the Patent Office. First, SPS urges that it was entitled to rely upon the patent examiner's failure to cite the Parker patent as an indication that Parker was not relevant, since that same examiner had two years earlier rejected the 1954 Villo application on Parker. Secondly, SPS contends that, since the patent examiner searched the same art class in which Parker was supposed to have been filed, it must be presumed that Parker was not cited because it was irrelevant, not because it was overlooked.

SPS' first contention, however, was expressly rejected by the Seventh Circuit in Armour and Company v. Swift and Company, 466 F.2d 767, 779 (7th Cir. 1972); see also NCR Corp. v. Eastman Kodak Co., 191 USPQ 194, 199 n.3 (N.D. Ill. 1976), and the Seventh Circuit has repeatedly rejected the second point relied upon by SPS in situations involving facts similar to those in this case.

Moreover, SPS cannot be heard to ask this court to presume for its benefit that the Parker patent was not cited because it was irrelevant when its own experienced patent counsel searched the same art class prior to the filing of the 1954 Villo application, and admittedly could not locate the anticipating Parker patent.

82. The culpability of SPS in failing to cite the Parker patent to the Patent Office, and to disclose the relevance of Parker as SPS understood its disclosure, is further heightened by the defendant's awareness of the close question of patentability presented by the lesser

prior art known to the Patent Office. In this respect, SPS was told by its patent counsel that the prospects for patentability on the Villo subject matter were "practically none" based upon the prior art then before the Patent Office Board of Appeals, i.e. the Gill, Brubaker and Stone patents, and SPS' own expert, Mr. Fischer, conceded that none of these patents was in any sense the equal of the Parker patent, as its disclosure was known to SPS. Further, SPS was aware that the Villo claims were aimed at a combination of individually old elements, and also knew of the rule that such combinations must pass a "rather severe test" of patentability, consonant with the "improbability of finding invention in an assembly of old elements." Sakraida v. Ag Pro, Inc., 425 U.S. 273, 282 (1976); Pederson v. Stewart-Warner Corp., 536 F.2d 1179, 1181 (7th Cir. 1976); Airtex v. Shelley Ceiling Co., 536 F.2d 145, 150 (7th Cir. 1976).

C. SPS Knowingly Withheld From the Patent Office Facts Showing a Possible Abandonment of the Subject Matter of the Villo Patent Claims

83. The patent statute expressly provides that a person shall not be entitled to a patent if "he has abandoned the invention." 35 U.S.C. §102(c). Accordingly, if the 1954 Villo application had a vestige of patentability, SPS' abandonment of the invention disclosed in that application would present an insurmountable bar to any later attempt by the defendant to patent that subject matter. This is true because subject matter once abandoned may not lawfully be resurrected and recaptured in a later filed patent application. Lorenz v. Finkl, 333 F.2d 885, 896 (CCPA 1964) ("There is a public interest not only in awarding a patent to the first inventor but also in not awarding it to one who has by abandonment of his application taken a first step in perhaps depriving the public of knowledge of his invention."); Langdon v. Saltser & Weinsier, Inc., 288F.2d 50, 52 (2d Cir. 1961); Davis Harvester Co. v. Long Mfg. Co., 252 F. Supp. 989, 1009

(E.D. N.C. 1966); General Electric Co. v. Hygrade Sylvania Corp., 61 F. Supp. 476, 496 (S.D. N.Y. 1955). As to this point, Mr. Andrews himself testified that it would have been "mandatory on the Board" to reject an application under 35 U.S.C. §102(c) if the facts showed that the claimed subject matter of that application had been abandoned earlier by the applicant.

84. From the evidence, it is clear that the subject matter of the 1954 Villo application was deliberately abandoned by SPS at least by the official abandonment date of that application on January 15, 1955. SPS, however, has urged in this action that the subject matter of the Villo patent claims was not invented, i.e. conceived and reduced to practice, until December, 1954 — some three months after the decision was made by SPS officials, in September, 1954, to abandon the subject matter of the 1954 Villo application. It is on this basis that SPS seeks to disentangle the subject matters of the 1954 Villo application and the Villo patent, and to prove that no abandonment of the Villo claims occurred.

85. This court, though, contrary to SPS' contentions, has already concluded that the 1954 Villo application supports in very large part the claims of the Villo patent. That fact having been found, it follows that the subject matter of the Villo patent claims may have been abandoned as of January 15, 1955, and, if such had occurred, could not lawfully have been recaptured in the claims of the Villo patent. It thus was a breach of SPS' duty of disclosure to the Patent Office to conceal from that office the fact of its abandonment of the 1954 Villo application, since disclosure of that abandonment might well have resulted in a total rejection of the Villo patent claims.

In this regard, the court believes that SPS had a clear duty at the time it filed its purportedly narrower Villo claims on January 30, 1956 to inform the Patent Office of the prior Villo abandonment, because SPS had a responsibility to maintain a distinction between the

subject matter it was claiming in the 1956 Villo application and that which it had earlier abandoned. See In re Ellis, 86 F.2d 412 (CCPA 1936). The Patent Office, although entitled to independently evaluate whether or not this responsibility had been discharged, was unable to perform that function because of SPS' concealment of the prior abandonment. This breach of SPS' duty of disclosure thus enabled the defendant to expand its claims to possibly embrace the earlier abandoned subject matter, and also may have kept the Patent Office from discovering the anticipating Parker patent.

86. Several evidentiary concessions can be made to SPS without altering the court's conclusions on this phase of the case. Specifically, it can be assumed: (a) that SPS did not abandon that which it now contends to have been invented by Mr. Villo in December, 1954; (b) that the defendant had a right to claim such subject matter in the 1956 Villo application; and (c) that the Villo invention was a patch bolt product, not simply a process. This can be done because a comparison of the 1954 and 1956 Villo applications still shows that, despite substantial language identities, the author of the 1956 application consciously and deliberately deleted bonding agents and adhesives, including epoxy, as an element of the patch bolt structure described in the specification. More significantly, the specific nylon-epoxy two layer patch which had been disclosed and claimed in the 1954 Villo application was neither disclosed nor claimed in the Villo patent.

This irrefutable documentary record leaves no doubt that SPS abandoned at least that portion of the 1954 application which related to the use of bonding agents and adhesives as a component of the patch bolt structure. If SPS had disclosed such abandonment to the Patent Office, as it was obligated to do under the law, the Villo patent claims, if allowed at all, likely would have been limited solely to a patch bolt product wherein the nylon was applied directly to the bolt, without the use of an intermediate bonding agent or

adhesive such as epoxy. If that had happened, SPS would not have been able to charge USM with infringement of the Villo patent, and the two lawsuits between these parties would never have occurred.

D. SPS Fraudulently Withheld From the Patent Office Facts Showing the Inoperability of a Substantial Portion, If Not All, of the Claimed Subject Matter of the Villo Patent

87. USM's counsel, in a deposition, paraphrased a representation, made in the Epstein patent file history, to Mr. Andrews in the form of a question. The question and answer reproduced below shows that the Villo patent never would have issued if that same statement had instead been made during prosecution of the Villo application:

Q If you had been told that nylon could not be directly bonded to the metal surface with sufficient strength to withstand the combination of forces that act upon a loaded fastener system, would you have allowed Claim 1?

A Told by whom?

Q By the applicant

A Certainly, since that is an ingredient of the claim, that it be an adequately fused bond, of course, if he admitted the claim was unpatentable by that statement, I don't see why I should have suggested the reversal of the examiner.

* * * * *

Q You wouldn't have reversed the examiner?

A That's right.

88. From the Appeals Board Opinion and Mr. Andrews' deposition testimony, it is clear that the Patent Office, in allowing the Villo claims, relied significantly upon SPS' representation that "the strength of appellant's fusion bond permits a local application of the nylon material to the thread without requiring other means for retaining the nylon." SPS' own work, however, showed this representation to be untrue; SPS, in fact, encountered extremely serious problems with "inconsistent fusion" of the nylon, which it never solved until it used other means, specifically the nylon-epoxy commercial industrial adhesive identified in the Epstein patent for retaining the nylon. The Patent Office should have been informed of these limitations on the operability of the Villo subject matter.

89. SPS urges this court to accept its argument that the Villo teachings were not wholly inoperative, but rather were inoperative only with respect to certain metals, and could be made operative as to some bolt metals by using what the Epstein file history characterized as "expensive and impractical" metal pretreatments. Even if this argument is accepted, however, the fact remains that the Patent Office should have been informed of these limitations on operability. See Shelco, Inc. v. Dow Chemical Co., 322 F. Supp. 485 (N.D. Ill. 1970), aff'd, 466 F.2d 613 (7th Cir. 1972); Teleflex, Inc. v. American Chain Cable Co., Inc., 273 F. Supp. 573 (S.D. N.Y. 1967). Such a disclosure might have convinced the Patent Office that the alleged Villo invention was not so significant as to merit patentability, or that the claims of the Villo patent should have been limited to the operative subject matter.

E. SPS Made Affirmative Misrepresentations of Material Fact to the Patent Office to Induce Allowance of the Villo Patent

90. Upon the citation to a British patent showing the use of neoprene on bolt threads, SPS represented to the patent examiner that neoprene was not the type of material that had utility for patch bolt applications. This representation, however, which persuaded the patent examiner to limit his rejection to prior art showing nylon, was inconsistent with Mr. Villo's own personal experiences, which indicated that fused neoprene displayed good adherence and gave a certain amount of torque. Said representation also was contrary to the representations made in the 1954 Villo application with respect to the utility of neoprene in patch bolt applications.

91. The Patent Office withdrew its rejection based upon the aforementioned British patent, and confined its rejection instead to the Gill and Brubaker patents — both of which showed nylon, but neither of which disclosed an article intended to function as a self-locking fastener. This was done because the Patent Office had been led to believe that plastic materials other than nylon would not adhere to bolt threads with the tenacity necessary for a thread locking application, and that such other materials did not display the further properties necessary for this type of application.

The 1954 Villo application listed various materials that SPS itself had concluded met all of the above criteria so fully and completely as to yield commercially acceptable products. SPS, though, deleted mention of all such materials, other than nylon, from the 1956 Villo specification, while otherwise lifting verbatim quotes from the 1954 application. It then argued that no prior art showed the combination being claimed. The teachings that SPS argued to be absent from the prior art known to the Patent Office, however, were in fact shown by the Parker patent, as Parker was understood by SPS in light of its own 1954 Villo application.

92. SPS also made the following representations respecting the commercial success of the Villo product, and as to the commercial failure of the pellet-type self-locking bolt, in its Brief to the Patent Office Board of Appeals:

> ... in every instance of the use of nylon, the solid nylon has been inserted in a recess formed in the threaded wall of the element, or in the body of the nut or bolt. This mode of using nylon has been reasonably successful, but has never gained any wide commercial use because it necessarily involves special structure, or an additional step or steps in the reduction of the threaded element, which renders the product non-competitive in the open market because of its relatively high cost.
>
> * * * * *
>
> The thread lock [of the invention] has proven extremely effective and highly commercial because it involves no departure from the standard normal structure of the threaded element, or of the thread itself.

At the time SPS made the above representations, it was a licensee of USM's Nylok division making and selling pellet-type self-locking bolts of the kind specifically referred to above as never having gained "any wide commercial use." The evidence, though, shows that in 1961 SPS sold $1,500,000 of such products, and that from 1956 through 1961 its "Nylok" sales totalled nearly $6,000,000. USM and its licensees, including SPS, sold over $8,000,000 worth of such self-locking bolts in 1961, and between 1956 and 1961 such sales exceeded $36,000,000.

By contrast, SPS' sales of the Villo patch bolt appear to have totalled only $131.20.

93. SPS' representations respecting the alleged commercial failure of the prior art, and as to its own commercial success with the Villo patch bolt, were false.

VIII. USM'S CONTENTIONS THAT SPS COMMITTED FRAUD ON THE COURT

A. A synopsis of USM's Contentions

94. In contending that SPS committed fraud on the court in the prior [1969] action between the parties, which was terminated by the aforementioned 1971 consent decree, USM asserts that SPS: (a) failed to disclose to USM facts pertaining to the existence of the abandoned 1954 Villo application, and all that flows from the import of that application; and (b) suppressed evidence relating to the Epstein patent proceedings being conducted in the Patent Office at the time the 1971 consent decree was entered.

95. USM contends that SPS had a duty to disclose these facts, and that SPS' failure to disclose them to USM in the prior action in effect fraudulently induced USM to enter into the 1971 consent decree.

USM's rationale is that but for this fraud on the part of SPS it would not have entered into the consent decree, because the abandoned 1954 Villo application provided the "missing link" as to the relevance of the Parker patent, as well as to the abandonment of the claimed subject matter of the Villo patent. Concerning the Epstein patent application proceedings, USM argues that, had it known what the Epstein patent and its prosecution disclosed, it would not have accepted a consent decree providing that the Villo patent covered a patch bolt made with "primer material."

B. The Non-disclosure of the Abandoned Villo Application

96. Resolution of USM's claim as to this issue will rest primarily upon the question of what SPS

produced in the prior action, when compared to the documents produced in this action, and upon the significance of the newly produced documents. What also must be determined, however, is whether SPS responded adequately to USM's discovery requests in the prior action, and whether USM had sufficient opportunity to seek further discovery, if it had chosen to do so in that action.

97. At trial, USM presented a book of collected exhibits which comprised all of the documentary exhibits produced in the present action that were relevant to the issue of the withheld 1954 Villo application. These exhibits were marked with red tabs, indicating those documents not produced in the prior action, and blue tabs, for those that had been produced. For clarity, these are tabulated below, along with the identity of each document:

DOCUMENTS PREVIOUSLY PRODUCED
(Blue Tabbed)

Ex. No.	Document	Date
PX 33	Letter from J. Villo to Howson and Howson-initial work on self-locking fasteners using liquid neoprene and liquid nylon.	August 6, 1953
PX 27	Disclosure form signed by Joseph Villo setting forth his work applying liquid Koroseal and Neoprene.	August 10, 1953
PX 34	Letter from E. L. Roach of SPS to Howson and Howson requesting patent search.	August 11, 1953

DOCUMENTS PREVIOUSLY PRODUCED
(Blue Tabbed)

PX 37	Letter from T. Baumgartner of SPS to Howson and Howson enclosing an outline for a patent application on Villo's self-locking thread invention-outline is four pages with seven sheets of data.	November 10, 1953
PX 42	Letter from Villo to Howson and Howson outlining another idea for a self-locking fastener, which involved heating the bolt to 600°F. and touching a nylon rod to it so that the nylon melted and adhered to the threads.	April 13, 1955
PX 43	Letter from Villo to Howson and Howson providing further details and clarifying the concept.	April 28, 1955
PX 89	Letter from Villo to Howson and Howson enclosing photographs of the dies used.	October 24, 1955

DOCUMENTS NOT PRODUCED IN THE PRIOR ACTION (Red Tabbed)

Ex. No.	Document	Date
PX 87	Handwritten initial draft of outline for patent, PX 37.	undated
PX 87A-D	Additional drafts of the patent outline, PX 37.	November 5, 1953
PX 139	Letter from Howson and Howson to T. Baumgartner enclosing a draft patent application.	December 17, 1953
PX 39	Copy of a patent application without drawing — presumably enclosed with PX 139.	undated
PX 40	Copy of a patent application without drawing.	undated
PX 40A	Certified copy of Application, Serial No. 401,939, filed January 4, 1954 in the name of J. Villo	
PX 140	Letter from T. Baumgartner to Howson and Howson commenting on draft of patent application.	December 29, 1953
PX 88	Letter from Howson and Howson to T. Baumgartner advising of the filing of Villo's patent application, PX 40A	January 25, 1954
PX 38	SPS Memorandum from Baumgartner to Villo, MacDowell & Sproat reporting rejection by the Patent Office in view of the Parker patent.	September 7, 1954

98. Pertinent to a consideration of the allegation of fraud on USM and the court in the prior action is a consideration of the discovery requests made in the prior action. USM asked interrogatories of SPS in the prior action which were answered by SPS, with said answers filed on January 8, 1971. USM's interrogatories 1 and 2, and SPS' answers thereto were as follows:

> 1. Identify each document relating to conception and reduction to practice of the subject matter disclosed in the patent in suit.
>
> Answer
>
> Copies of these documents were made available to defendants during depositions taken of Joseph P. Villo by defendants in Jenkintown, Pennsylvania, on December 15, 1970. These documents were made exhibits of this Villo deposition and copies were delivered to defendants in New York, New York, on December 22, 1970.
>
> 2. If any prior art items were considered in connection with preparation of the application for the patent in suit or the predecessor Villo application referred to therein, or in connection with further consideration of the patent in suit (as in connection with any action or proposed action at law or in equity involving it, although not including prior art referred to by defendants in answer to plaintiff's interrogatories in this action), identify each such item.
>
> Answer
>
> No prior art items were considered specifically in connection with the various activities referred to in this interrogatory. However, as a result of plaintiff's involvement

with self-locking fasteners, plaintiff was aware of the following art prior to the filing of the predecessor Villo application referred to in the patent in suit:

U.S. Patent 2,399,526	Warren
U.S. Patent 992,331	v. Briesen
U.S. Patent 202,407	Brunson
U.S. Patent 2,502,892	Saylor
U.S. Patent 1,175,034	Woodward
U.S. Patent 2,321,414	Parker

The listing of these patents should not be construed as an admission by plaintiff as to the relevance of any of these patents insofar as the Villo patent in suit is concerned.

99. USM also took the deposition of Joseph P. Villo on December 15, 1970, at which time the following examination colloquy took place:

BY MR. RYMER (Counsel for USM in the 1969 action):

Q. Now, I show you what I believe purports to be a memorandum on the letterhead of Standard Pressed Steel, dated August 10, 1953, and signed by you and four other individuals, to which is attached two, I will call them, blueprints, although they are technically another form of reproduction.

Is that, in fact, what this is, Mr. Villo?

A Yes. This is one of the experiments. Yes.

Q And that is a memorandum that was generated on the date it bears?

A Yes.

Q Are the two drawings attached to —

MR. RYMER: Excuse me. Why don't you mark it 6?

A letter on the letterhead of Standard Pressed Steel Co., dated August 10, 1953, no addressee, executed by Joseph P. Villo, Walter Hambrecht, Loring Roach, and Gertrude S. Taddei, to which are attached two drawings, Nos. 0.51.300.38177 and 0.11.300.38176, was marked Villo Deposition Exhibit No. 6 for identification.)

BY MR. RYMER:

Q What are the two drawings that are attached to Villo Deposition Exhibit No. 6?

A Well, this shows a nut with a lock internally —

Q That's the first drawing?

a Yes.

— and also it shows a bolt with a lock on the crest and the flank of the threads.

Q And that's the second drawing you are referring to?

A Yes.

Q Now, this memorandum or Villo Deposition Exhibit No. 6 asserts that "we have applied for a patent."

Was that accurate at that time?

A Let me see that. What is the date?

Q August 10, 1953.

A I guess that was accurate at that time, yes.

MR. RYMER: I wonder if we could see a copy of that application, Mr. Conner?

MR. CONNER: I don't know whether there was, in fact, an application on file in the Patent Office at that time, but unless it is one which is involved in the present suit, that is, either the application for the patent in suit or the parent application, of which this application, the patent in suit, is a continuation in part, I don't believe we should produce it.

It is an earlier form of the invention, in which the locking coating extends entirely around the circumference of the threads. It isn't the form of invention that is presently disclosed and claimed. I don't think that application is relevant, if there was one at that time.

100. The document marked as Exhibit 6 and discussed in the above quoted excerpt of Villo's deposition pertained to experiments made by Mr. Villo in July, 1953, where Koroseal and Neoprene were applied in liquid form on the outer surface of the threads of a fastener. Two drawings were attached to that document, one showing a nut and one of a bolt where the bolt is indicated to have been coated, in a limited axial extent, all the way about the circumference. The document further states " ... we have applied for a patent through Howson and Howson, our patent attorneys."

101. It is clear from this record, and also from the "Outline for Patent Application for Self-Locking Thread" (marked as PX 37 in the present action and as SPS' exhibit PX 12 in the prior action), that SPS had filed a patent application embodying a self-locking fastener in which the locking coating extended entirely

around the circumference of the threads. When USM's counsel asked to see a copy of that application, SPS' counsel at the time, Mr. William C. Conner, stated that he didn't think it should be produced. No further request or demand for production of that application ever was made.

102. After considering the exhibits which were produced in the prior trial, together with those not produced in that action, the court finds that USM in the prior action had sufficient and adequate indication both that an earlier SPS patent application had been filed, and as to what that application was directed to. As to this latter point, it must be noted that the aforementioned "Outline for Patent Application for Self-Locking Thread," which was produced in the earlier action, contained all of the disclosure embodied in the specifications of the abandoned Villo application.

103. As regards the remaining documents not produced in the earlier action which relate to the abandoned Villo application, the court believes that USM, had it chosen to do so, could have sought out such information through further discovery requests.

104. In conclusion, the court feels that SPS document production was sufficient enough for USM to have reasonably understood that a patent application embodying the disclosures set forth in PX 27 and PX 37 had been filed. What USM did not know at that time, but likely could have found out had it elected to make further discovery inquiries, was that this application was rejected by the Patent Office in view of the Parker patent, and that SPS then abandoned the application.

105. Concerning USM's arguments with respect to the Parker patent, it is clear from the record before the Patent Office that SPS did not, in its prosecution of the Villo patent, bring the Parker patent to the attention of the patent examiner. USM, however, was aware of this fact in the earlier action. SPS had, in

addition, specifically informed USM in the prior action that it was aware of the Parker patent before the Villo patent issued.

106. The court also has reviewed the evidence with respect to the scope of the discovery requests made to SPS in the prior action and finds that SPS responded adequately, although not as completely as it might have, to the inquiries made of it during that proceeding.

107. Regarding SPS' discovery responses, it must be remembered that USM had requested documents "relating to conception and reduction to practice of the subject matter disclosed in the patent in suit [the Villo patent]."

"Conception" and "reduction to practice" are terms of art in patent law. "Conception" generally is interpreted to mean the full and complete mental act of formulating the invention to be claimed, and "reduction to practice" normally is thought to be the making of the product of the invention and the testing of it to see if it performs as envisioned.

SPS responded to this request of USM by producing, among others, the documents marked in this litigation as PX 33, PX 27, PX 34, PX 37, PX 42, PX 43 and PX 89. Of these, only PX 42 — the April 13, 1955 letter to Howson & Howson outlining the new idea of heating a bolt to 600°F. and touching a nylon rod to it so that the nylon melted and adhered to the threads — clearly fell within the discovery request "relating to conception and reduction to practice of the subject matter disclosed in the patent in suit."

108. SPS' document production in the prior action, while incomplete, was sufficient to meet the minimum requirements of USM's discovery requests. USM could have pursued discovery further had it chosen to do so, but the plaintiff instead settled the earlier case before taking any additional discovery, apparently because

settlement at that time was believed warranted for economic reasons.

109. Absent its obligation to comply with reasonable discovery requests, SPS owed no duty to the court to reveal the abandoned 1954 Villo application. Accordingly, as SPS was not required, as a matter of law, to produce that document in connection with the 1971 consent decree, it committed no fraud by failing to do so.

110. USM also points to the deposition testimony of Joseph Villo in a lawsuit involving SPS and the Elastic Stop Nut Corporation, Civil Action No. 1047-66, as evidence of SPS' fraud. That testimony, however, must be looked upon as inconclusive, for Mr. Villo stated in his Elastic Stop Nut deposition that he did not remember if another patent application had been filed in connection with his patch bolt invention. In view of Mr. Villo's later deposition testimony in the 1969 USM action that a prior application had been filed, the court believes that the discrepancies in this regard in Villo's earlier testimony must be considered of no consequence.

111. USM next contends that SPS fraudulently suppressed certain significant documents in the prior action between the parties, while producing many other documents relating to the early Villo project development, then implies that SPS relied only upon the produced documents to convince Judge Austin that USM was not entitled to the grant back license it sought. In response to this contention of USM, the court has reviewed the record in the 1969 license action and finds that record to amply support the conclusion reached by Judge Austin — that SPS had successfully conceived and reduced to practice the Villo invention prior to October 27, 1955. This court further finds that production of the documents not revealed in the earlier action, and arguably not required to be produced by SPS within the context of the discovery requested, would not have affected the decision in that case.

112. USM also argues in connection with its fraud on the court claim that SPS' "early development file," PX 249, was available to the defendant's counsel in the prior action, but that only selected misleading documents were produced from that file.

As to this point, Andrew Ney, the SPS house counsel who assisted SPS' trial counsel in the prior action, testified that he could not state whether documents used in the earlier trial came from what has been termed in this action the "early development file." Also, the court has compared the documents produced in the prior action with the original documents produced in the matter at bar, filed as PX 249. Based upon that comparison, and upon the testimony of Mr. Ney, the court finds that there is no conclusive evidence that SPS' counsel had the aforementioned "early development file" available to them in the prior action, or that said counsel picked only certain documents from that file for production to USM.

113. Finding 112 has been based in large part upon the following analysis. With the exception of the application drafts, initial drafts of PX 37 and the documents generated after the filing of the abandoned 1954 Villo application, only four documents of significance - PX 33, PX 27, PX 34 and PX 37 - were produced by SPS in the prior action. Of these, no counterparts of PX 33 and PX 27 are found in the "early development file." Accordingly, it cannot reasonably be said that these documents were taken from that file in the prior action.

As to the remaining documents, PX 34 and PX 37, counterpart documents can be found in the "early development file." A comparison of the equivalent documents produced in the prior action with the documents found in the "early development file," however, reveals inconsistencies of a magnitude sufficient to preclude this court fron finding that this file was available to SPS' counsel in the earlier litigation.

114. Of note in this respect is the comparison of PX 34, produced in this action from the "early development file," with the copy of the equivalent document made available in the prior action. PX 34 is a letter, dated August 11, 1953, from SPS to the law firm of Howson & Howson. The copy of that letter produced in the first action had no additional notations on it, while the copy produced in the present action, marked as PX 34, includes the handwritten notation "cc: J. Villo, J. MacDowell." Also, when the cover letter for PX 37, "Outline for Patent Application" produced in this action from the "early development file," is compared with the copy of the equivalent document used in the prior action, it becomes evident that a different copy of that letter was involved in the earlier litigation. The cover letter introduced in the prior litigation shows a check mark next to J. Villo's name to indicate him as a recipient; the copy of that letter produced from the "early development file" has no such indication.

115. For USM to prevail on its claim of fraud with respect to SPS' purported suppression of documents in the prior litigation, the plaintiff also must show that someone at SPS, either its house counsel at the time of that action, Andrew Ney, or its trial counsel, William C. Conner, had access to the "early development file" and knowingly withheld production of discoverable documents from that file while producing others.

116. From the evidence presented in the matter at bar, it appears clear that SPS' former trial counsel, William C. Conner, never saw or had access to the "early development file." That being true, it cannot reasonably be concluded that his conduct in the prior action was in any way less than forthright and candid.

117. SPS' former house counsel, Andrew Ney, has testified that he did not know whether the documents produced in the earlier action came from the "early development file." Mr. Ney also testified that he

identified the abandoned 1954 Villo application on November 8, 1974, by filing date and serial number, in answer to USM's interrogatory No. 8 in this action, although he stated further that at the time he did not recognize the document as being relevant.

118. After SPS answered USM's interrogatories on November 8, 1974, USM inspected documents at SPS in late November, 1974, and also inspected the "early development file" at SPS' counsel's office on December 9, 1974. At that time, SPS produced for USM all of the documents in the "early development file" not withheld on grounds of privilege.

119. After reviewing the conduct of Mr. Ney in respect to the discovery production in this case and in the prior action, the court does believe that, from the facts presented, any fraudulent motivation can fairly be attributed to him. This is especially true when it is remembered that, from the record, it appears that Ney, and apparently he alone, found and identified for USM those documents the plaintiff now argues are so meaningful to this action.

120. The above-noted facts, when viewed in toto, coupled with the testimony of Mr. Ney, also convince the court that USM has not overcome its burden of showing, by clear and convincing evidence, that SPS fraudulently withheld documents from USM in the earlier [1969] action between the parties.

C. The Non-disclosure of the Epstein Patent Applications

121. USM also asserts that SPS had an affirmative duty to disclose to it prior to the entry of the 1971 consent decree the activity associated with SPS' prosecution of the Epstein patent. This patent, issued June 5, 1973, was based upon an initial application, Serial No. 437,283 filed March 4, 1965, a continuation-in-part application, Serial No. 524,631 filed February 23, 1966, and a divisional application, Serial No. 107,402

filed January 18, 1971. It is USM's contention that statements made in this patent, and during SPS' prosecution of the applications, which were unavailable to USM until the Epstein patent issued in June, 1973, so limit the scope of the Villo patent claims that, had USM been aware of the Epstein patent before it accepted the 1971 consent decree, it would not have agreed to the entry of said decree.

122. As concerns the strength of this argument of USM, the court notes first that USM was aware of Michael Epstein, of his association with the Battelle Memorial Institute, and of the fact that SPS had obtained a British patent, No. 1,137,204, issued December 18, 1968, of which Epstein was the patentee. Regarding this latter point, USM's Mr. Megley testified specifically that USM was aware of the British Epstein patent during the pendency of the prior action. USM also had scheduled the depositions of Michael Epstein and the Battelle Memorial Institute during the 1969 action, but apparently did not complete them prior to settling that cause.

123. To support its contention that the Epstein materials were highly relevant, however, USM points to the following excerpts:

> Unfortunately the engineering Thermoplastics [nylon et al.] cannot be directly bonded to metal surfaces with sufficient strength to withstand the peculiar combination of forces that act upon loaded fastener systems.
>
> * * * *
>
> In some instances, the engineering Thermoplastics can be satisfactorily affixed to certain metals if the surface is given special chemical or physical pretreatments to make a highly porous surface. However,

> such operations are expensive and unpractical.
>
> * * * *
>
> Nylon alone cannot be bonded directly to such substrates [carbon steel, staianless steel, oxide coated steel or cadmium plated steel] with a satisfactory bond strength to withstand the complex forces to which loaded fasteners are subjected.

The defendant, though, in response to USM's annotations of the above quotes, which were excerpted from the file wrapper histories of the Epstein patent, has submitted a copy of the British Epstein patent - which, as was noted previously, was available and actually known to USM before the conclusion of the prior action. SPS' Exhibit 15A has marked in red every portion of the specification of the issued Epstein patent that had an exact counterpart in the corresponding British patent. The court finds it significant that almost all of the specifications of the United States Epstein patent are found in the British patent and, more importantly, that the three excerpts quoted above are found in the British Epstein patent.

124. For the reasons stated above, the court believes that USM had sufficient information available to it during the 1969 action between the parties to allow it to make an informed judgment as to the value of the same dfenses it now raises against the Villo patent because of statements made in the Epstein patent.

Accordingly, the court finds that SPS' failure to disclose to USM its [SPS'] activities in connection with the Epstein patent did not amount to or constitute a fraud upon the court in that earlier action.

D. Miscellaneous Allegations of Fraud

125. USM next asserts that, in the prior action, SPS deliberately and fraudulently withheld from USM its [SPS'] knowledge of Belgian patent No. 517,055. That patent, it appears, had been called to SPS' attention in the earlier [pre-1969] litigation between the defendant and the Elastic Stop Nut Corporation.

After reviewing the interrogatory in question sent by USM to SPS in the 1969 action between the parties, the court is of the opinion that the evidence is not sufficient to support USM's contention that SPS incorrectly answered its [USM's] discovery request. As to this point, the 1969 USM interrogatory in question provided:

> If any prior art items were considered in connection with preparation of the application for the patent in suit or the predecessor Villo application referred to therein, or in connection with further consideration of the patent in suit (as in connection with any action or proposed action at law or in equity involving it, although not including prior art referred to by defendants in answer to plaintiff's interrogatories in this action), identify each such item.

SPS answered this interrogatory in part by stating:

> No prior art items were considered specifically in connection with the various activities referred to in this interrogatory.

USM has submitted no evidence to refute the validity of this answer of SPS. The interrogatory in question asked for prior art "considered" by SPS. As used in the context of this USM interrogatory, the term "considered" meant known to and taken into consideration in some way by SPS. Accordingly, if SPS

knew of the Belgian patent, but did not take it into consideration, its response to USM was accurate.

USM has not demonstrated by clear and convincing evidence that SPS in fact gave consideration to the Belgian patent. That being true, this court cannot properly find that SPS fraudulently responded to this discovery request of USM.

126. USM also argues that a fraud upon it and the court was perpetrated by SPS through the testimony of Joseph Villo in the prior trial. In that trial, Mr. Villo testified that in 1953 he made patch bolts by heating the bolt and touching a nylon rod to it to melt the nylon. SPS asserts that this testimony was in error, and the evidence appears to support this contention of the defendant. The documents produced in the prior trial, when coupled with those made available in the matter at bar, estabalish that Mr. Villo did not make patch bolts using the above-described method until December, 1974. That being true, after reviewing the record in the prior action, this court does not believe that Mr. Villo's erroneous testimony would have altered Judge Austin's decision in any way. This is so because all SPS had to show to prevail in the prior action was successful reduction to practice of the Villo patch bolt before October 27, 1955. This the defendant did, regardless of whether Villo made patch bolts by heating the fastener and touching a nylon rod to it in 1953 or 1954.

127. Lastly, USM contends that SPS' reliance in the prior action on the initial self-locking fastener development of 1953, as embodied in the abandoned 1954 Villo application, amounted in reality to a

fraudulent presentation of evidence in the earlier trial.[5] This court, however, is not persuaded that such was the case, nor is it convinced that a correction of this aspect of SPS' presentation would have had any relevant or material effect on Judge Austin's decision.

A review of the record in the prior action reveals that SPS explained to the court a history of self-locking fastener developments. This exposition dealt with various types of self-locking fasteners in which a mechanical deformation of one of the fastener elements was provided to achieve the self-locking effect. The record continues with a discussion of the "history of the development of the patch-type threaded fastener, as disclosed and claimed in the Villo patent."

From this record, the court believes that SPS' prior testimony regarding the development of its circumferential patch-type fastener, as embodied in PX 40A, could reasonably have been considered part of the history of the development of self-locking fasteners generally and, therefore, could logically and rationally have been presented by SPS to inform the court of the full state of that development. Accordingly the court finds that there was no fraudulent presentation of evidence by SPS in the earlier action.

CONCLUSIONS OF LAW

1. The court has jurisdiction over the parties and over the subject matter of the action at bar.

---

5. USM also raised as an issue SPS' settlement with the Astorlok Corporation in another legal action involving the Villo patent. No evidence or testimony was adduced at trial as to this issue, however, and the cause was not pleaded in USM's Amended and Supplemental Complaint. Accordingly, the court, for those reasons, has declined to in any way deal with this issue.

2. Venue in respect to the matter at bar is proper in this judicial district.

3. All of the Findings of Fact made above that can also properly be deemed Conclusions of Law are hereby adopted as Conclusions of Law.

4. USM's patch-type self-locking nuts do not infringe the SPS Villo patent.

5. The plaintiff has not established by clear and convincing evidence that defendant SPS' conduct in the prior [1969] action between the parties amounted to or otherwise constituted actionable fraud upon the court.

6. The 1971 consent decree entered into between the parties herein, in that it was not the product of fraud or coercion on the part of either party, is entitled to, and accordingly will be given, res judicata effect. American Equipment Corp. v. Wikomi Mfg. Co., 630 F.2d 544 (7th Cir. 1980).

7. Plaintiff USM has established by clear and convincing evidence that SPS' conduct before the Patent Office in connection with its prosecution of the Villo patent claims was so fraudulent and inequitable as to constitute actionable fraud upon the Patent Office. That being true, by reason of such conduct on the part of SPS, the Villo patent is hereby declared void and unenforceable. Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co., 324 U.S. 806, 816 (1945).

8. SPS having been found to have committed actionable fraud upon the Patent Office, and as such fraud has operated to the detriment of plaintiff USM, it is appropriate under the circumstances that USM be returned to the position it occupied before the matter at bar was instituted. USM, therefore, is awarded as compensatory

damages for SPS' fraud both full recoupment, with interest at the legal rate, of all royalties and other monies it [USM] paid to SPS under the Villo patent license discussed above, and also that other economic loss suffered by the plaintiff which was reasonably and proximately caused by the unlawful conduct of SPS; said damages to be calculated from June 4, 1974, the date of filing of the action at bar. In this regard, the court reserves jurisdiction for the purpose of conducting an accounting to determine the magnitude of the damages incurred by USM.

9. The matter at bar being an exceptional case within the meaning of 35 U.S.C. §285, because both fraud and bad faith have been established by the evidence of record, USM is entitled to an award of reasonable attorneys' fees. Accordingly, as SPS has been found guilty of fraudulent and inequitable conduct before the Patent Office, all relief is denied said defendant and the costs of the present proceeding, including those reasonable attorneys' fees incurred by the plaintiff, are ordered assessed against SPS and awarded to USM. See Universal Oil Products Co. v. Root Refining Co., 328 U.S. 575 (1946). As concerns this assessment, plaintiff USM is given to June 15, 1981 to present its verified petition for attorneys' fees and costs, and the defendant will have until July 3, 1981 to file any objections it may have thereto.

10. Pursuant to Rule 54(b), Fed.R.Civ.P., as the court believes that there is no just reason for delay in regard to same, it is hereby ordered that final judgment as to the liability of defendant SPS on the claims raised in Counts I and IV of plaintiff USM's complaint be entered forthwith.

IT IS SO ORDERED.

s/s Nicholas J. Bua
Nicholas J. Bua, Judge
United States District Court

DATED: May 4, 1981

In the

United States Court of Appeals

For the Seventh Circuit

Nos. 78-2307, 81-1878, 81-1908

USM CORPORATION,

Plaintiff-Appellant,

v.

SPS TECHNOLOGIES, INC.,

Defendant-Appellee.

Appeal from the United States District Court for the Northern District of Illinois, Eastern Division.
No. 74-C-1514—**Nicholas J. Bua**, *Judge.*

ARGUED FEBRUARY 26, 1982—DECIDED DECEMBER 3, 1982

Before PELL, *Circuit Judge*, STEWART, *Associate Justice (Retired)*, and POSNER, *Circuit Judge.**

POSNER, *Circuit Judge.* These consolidated appeals bring up to us several rulings, made in 1978 and 1981, disposing of various aspects of a patent suit. See 453 F. Supp. 743 (N.D. Ill. 1978); 514 F. Supp. 213 (N.D. Ill. 1981). The district court has certified these rulings for

* Judge Sprecher was originally the third member of the panel, but his untimely death prevented his participation in the decision of this case. Judge Posner took his place and has read the briefs and pertinent portions of the record and listened to the tape recording of the oral argument.

immediate appeal under Fed. R. Civ. P. 54(b). The rulings involve the res judicata effect of patent consent decrees, fraud as a defense to res judicata, and the lawfulness of differential patent royalties under antitrust and patent-misuse principles.

SPS, a manufacturer of industrial fasteners, owned a patent, issued in 1963, on a patch-type self-locking industrial fastener. In 1969 it sued USM, a competing manufacturer of fasteners, for infringement. After a trial on the issue whether USM had a valid license under the patent by virtue of a grant-back clause in a licensing agreement between the parties, the district court held that USM did not have a valid license. *Standard Pressed Steel Co. v. Coral Corp.*, 168 U.S.P.Q. 741 (N.D. Ill. 1971). The parties then settled the case by entry of a consent judgment in which USM acknowledged that the patent was valid and had been infringed. As part of the settlement SPS granted USM a license which allowed USM to continue using the patent but required it to pay royalties to SPS.

In 1974, three years after SPS's suit had been settled, USM brought the present suit, seeking to invalidate SPS's patent and get back the royalties it had paid since the settlement. For the first time USM alleged that SPS had procured the patent by a fraud on the Patent Office, and alleged that SPS had concealed this fraud from the district court in the previous suit and by so doing had committed a fraud on the court as well. The district court held after a bench trial that SPS had committed a fraud on the Patent Office, but not on the court, and that USM was entitled to have the patent declared void as of the date the second suit had been filed and to get back the royalties it had paid since then, plus attorneys' fees. The court declined to reconsider a ruling in its 1978 opinion that res judicata prevented USM from getting back any of the royalties it had paid before the second suit was filed—that is, between 1971, the date of the license agreement, and 1974.

In these cross-appeals, USM challenges the district court's conclusion that there was no fraud on the court in

the first suit and argues that in any event a consent judgment in a patent case should have no res judicata effect, while SPS challenges the district court's conclusion that it committed a fraud on the Patent Office and argues that in any event res judicata bars USM from any relief based on that fraud. If SPS's res judicata argument is correct, we need not consider whether the district court correctly found fraud on the Patent Office; so it is with the res judicata issue that we begin. We cannot end there, though. USM's suit not only challenges the validity of the patent but also alleges that certain terms that first appeared in the license agreement entered into at the termination of the first suit constitute patent misuse. As these terms could not have been challenged in the first suit, USM's challenge to them cannot be barred by res judicata. The district court granted summary judgment for SPS on this aspect of the case in 1978, and USM's appeal brings this ruling up to us along with the rulings on fraud and res judicata.

American Equipment Corp. v. Wikomi Mfg. Co., 630 F.2d 544 (7th Cir. 1980), is the authoritative decision in this circuit on the issue of the res judicata effect of consent decrees in patent suits. American had sued Wikomi for patent infringement and the case had been settled—just as SPS's suit against USM was settled—by the entry of a consent decree that recited validity and infringement. Also as in this case, the infringer, Wikomi, had received a license to continue using the patent. Wikomi's successor corporation refused to pay the royalties due under the license, and American sued. We held that American was entitled to summary judgment because a patent consent decree which recites both validity and infringement is res judicata in any subsequent proceeding between the parties (or those in privity of contract with them) over the validity or infringement of the patent. This holding is supported by other recent decisions and by scholarly commentary. See, e.g., *Interdynamics, Inc. v. Firma Wolf*, 653 F.2d 93, 96-98 (3d Cir. 1981); *Vulcan, Inc. v. Fordees Corp.*, 658 F.2d 1106, 1111 (6th Cir. 1981); Note, *"To Bind or Not to Bind": Bar and Merger Treatment of Consent Decrees in Patent Infringement Litiga-*

tion, 74 Colum. L. Rev. 1322 (1974). We decline USM's invitation to reexamine it.

Unless the district court's finding that SPS did not commit fraud on the court that approved the consent decree is overturned, a matter to which we shall turn shortly, *Wikomi* requires us to reject the district court's Solomonic approach of giving the consent decree some but not complete res judicata effect—that is, up to the date on which the second suit was filed. *Wikomi* held that the second suit was barred in its entirety by the consent judgment in the first. True, the consent judgment in *Wikomi* included an injunction against infringement and the one here did not, but that makes no difference; it is the fact that a cause of action has been adjudicated rather than the specific relief granted the prevailing party that brings res judicata into play. *Lambert v. Conrad*, 536 F.2d 1183, 1185 (7th Cir. 1976); 1 Restatement (Second) of Judgments § 25(2) (1982).

We are asked to create an exception to *Wikomi* for cases where the patent is alleged not merely to be invalid but to have been procured by fraud on the Patent Office. (The *Wikomi* opinion does not indicate the basis on which Wikomi's successor attacked the validity of the patent in the second action.) But such an exception, rather than deterring patent fraud, would reduce the incentive of an infringer to prove fraud when first sued; he would have nothing to lose by biding his time until the terms of the settlement became onerous to him. True, res judicata, like any other threshold defense, may immunize some patent frauds—the one alleged in this case, for example—from challenge by some licensees. But the immunity will be incomplete, since res judicata can be invoked only against a party to a previous litigation and those in privity with that party—against USM and those in privity with it, but not against SPS's other licensees (there are some, as we shall see), or the Department of Justice, which can sue to cancel a patent procured by fraud. *United States v. Saf-T-Boom Corp.*, 431 F.2d 737 (8th Cir. 1970) (per curiam).

As we are not persuaded that patent fraud will on balance be less common if there is an exception to res judicata for cases in which such fraud is alleged, the general policy in favor of finality of litigation leads us to reject the exception. And since it is immaterial that in this case fraud was not alleged in the earlier suit—fraud is just another ground for contesting the validity of a patent, and res judicata prevents the litigation of any ground that could have been advanced in the earlier suit in support of the claim (patent invalidity) made there, e.g., *Diaz v. Indian Head, Inc.*, 686 F.2d 558, 562 (7th Cir. 1982); 1 Restatement, *supra*, § 25(1)—all that remains to be considered on the issue of patent validity is whether the consent decree, as distinct from the patent, was procured fraudulently. SPS concedes that if it was, it has no res judicata effect.

Illustrative of SPS's allegedly fraudulent conduct is its counsel's refusal, in the course of pretrial discovery in the first suit, to turn over to USM a patent application that the inventor of the patented device in issue, Mr. Villo, had submitted to the Patent Office some years before that patent was applied for but that he had later withdrawn. SPS's failure to draw this application to the Patent Office's attention was one of the acts that the court below deemed a fraud on the Patent Office. If this was fraud, and if SPS fraudulently withheld the application from opposing counsel in the first lawsuit, a strong argument can be made that SPS obtained the consent decree confirming the validity of its patent by fraud also.

At his deposition, Villo mentioned having filed an earlier patent application. USM's counsel asked SPS's counsel "if we could see a copy of that application." SPS's counsel refused, saying that Villo had been describing "an earlier form of the invention . . . . It isn't the form of invention that is presently disclosed and claimed. I don't think that application is relevant, if there was one at that time." USM dropped the matter. The district court found that USM knew enough about the application from this and other stray bits of information that if it had "elected to make further discovery inquiries" it would have ob-

tained the contents of the application itself and any other information it needed to prove a fraud on the Patent Office.

At first glance this finding may seem to import into a fraud inquiry, where it normally would not belong, a concept of contributory negligence: if USM had been more diligent, it would not have been fooled. Contributory negligence is a defense only to unintentional torts, and fraud is an intentional tort. See, e.g., *Cenco Inc. v. Seidman & Seidman*, 686 F.2d 449, 454 (7th Cir. 1982). But the district court was not alone in thinking that a party's diligence—before as well as after the entry of judgment—is relevant to deciding whether the party may get the judgment set aside on grounds of fraud. One of the "critical considerations" bearing on that decision is "whether in the original action the victim had pursued reasonable precautions against deception." 2 Restatement, *supra*, § 70, at p. 182. Fraud in responding to a request for discovery should mean a more active obstruction of the inquiry than simply putting opposing counsel to the burden of getting a discovery order—which is all that happened here. SPS's counsel did not deny the existence of the patent application; and though he denied its relevance, that would not have prevented USM's counsel from obtaining the document if he had tried harder. Counsel merely refused to produce the document voluntarily, no doubt in the hope, which proved to be well founded, that USM's counsel would not pursue the matter further.

Fraud is just a name for the misrepresentations and omissions that legislators or judges want to punish; the concrete question we have to answer is whether the kind of conduct that SPS's counsel engaged in should be punished—and by denying finality to consent decrees, a heavy sanction. We are unwilling to judge the conduct of SPS's counsel by the standards that would be appropriate if he had been responding to a request from his client or from someone else to whom he owed fiduciary obligations. His relationship with USM's counsel was adversary rather than fiduciary. The American system of

justice has been built on the premise that truth, at least the sort of truth that is relevant to legal rights and remedies, is likeliest to emerge from a vigorously competitive contest between opposing counsel. In any competitive contest—even war—there are constraints on the adversaries. In litigation one of these is that the adversaries may not resort to fraud; but that as we have said is a conclusion rather than a standard. It would be psychologically unrealistic, given the adversary setting, to call a failure to go out of one's way to produce damaging documents a "fraud" on opposing counsel and so, perhaps, on the court. To respond to specific discovery requests is one thing; to construe them broadly is another, and goes against the trial lawyer's grain. We agree that a lawyer's "failure to disclose an instrument which he could have supposed reasonably—although, as it now appears, erroneously—to have been known to his adversary" is not fraud on the court. *Kupferman v. Consolidated Research & Mfg. Corp.*, 459 F.2d 1072, 1081 (2d Cir. 1972).

Hazel-Atlas Glass Co. v. Hartford-Empire Co., 322 U.S. 238 (1944), where the Supreme Court pushed the concept of fraud on the court in patent cases to its furthest, and some think an unjustified, extreme, see 7 Moore & Lucas, Moore's Federal Practice 512-13 (2d ed. 1982); 11 Wright & Miller, Federal Practice and Procedure § 2870, at pp. 255-56 (1973), does not require a different result. A patent applicant's lawyer wrote an article extolling as a revolutionary advance the method of molding glass that was the subject of the application, and persuaded the president of the glass blowers' union to sign the article as its author. The lawyer's role was not disclosed. The patent was issued and a federal court of appeals relied on the article in holding the patent valid.

That lawyer's misrepresentation was more egregious than the conduct here, which conformed to the well-nigh universal practice of construing an adversary's document requests narrowly and yielding ground only slowly and grudgingly. We would be less tolerant if there had been no adversary contest, and the parties had jointly concealed information from the judge who had to approve

the consent decree. The level of candor required in the parties' dealings with the court is higher than that required in their dealings with each other in the heat of forensic combat.

Other acts of fraud on the court are alleged besides the failure to hand over Villo's earlier patent application, but they are similar or at least no worse, and we agree with the district court that neither singly nor in combination do they warrant setting aside the consent decree. Hence the 1971 decree was valid; it prevents the parties from relitigating the validity of SPS's patent and USM's alleged infringement of it; and so we need not consider whether the district court was correct in concluding that SPS had obtained its patent by a fraud on the Patent Office.

The remaining issue is whether SPS committed patent misuse by including a differential royalty schedule in the license agreement entered into as part of the settlement of the earlier suit. The agreement requires USM to remit to SPS 25 percent of any royalties it obtains by sublicensing SPS's patent, except that if USM should happen to sublicense any of four companies that SPS had previously licensed directly USM must remit 75 percent of the royalties obtained from the sublicensee(s).

The doctrine of patent misuse has been described as an equitable concept designed to prevent a patent owner from using the patent in a manner contrary to public policy. *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488 (1942). This is too vague a formulation to be useful; taken seriously it would put all patent rights at hazard; and in application the doctrine has largely been confined to a handful of specific practices by which the patentee seemed to be trying to "extend" his patent grant beyond its statutory limits. An early example was fixing the price at which the purchaser of the patented item could resell it. See *Bauer & Cie. v. O'Donnell*, 229 U.S. 1 (1913). The courts reasoned (in rather a circular fashion, one must admit) that once the patent owner had given up title to the patented item his patent rights were at an end, and

any further restriction on the purchaser would extend the patent beyond its statutory bounds. Similar thinking lies behind the most common application of the doctrine, which is to prevent the patent owner from requiring his licensees to buy an unpatented staple item used with the patented device—for example, ink with a mimeograph machine. See generally *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 188-93 (1980).

Both examples—resale price maintenance and tying—suggest an overlap between misuse and antitrust principles. But although resale price maintenance by patentees was condemned as misuse shortly after *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911), held that the Sherman Act forbade resale price maintenance in nonpatent cases, see *Bauer & Cie. v. O'Donnell, supra*, and patent tie-ins were condemned as misuse shortly after the enactment of the tying provision (section 3) of the Clayton Act, 15 U.S.C. § 14, in 1914, see *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 517-18 (1917), in both instances the condemnation of the patentee's conduct was based on the doctrine of patent misuse rather than on antitrust law. More recently the doctrine has been used to forbid the patentee to require his licensees to pay royalties beyond the expiration of the patent, *Brulotte v. Thys Co.*, 379 U.S. 29 (1964), or to measure royalties by the sales of unpatented end products containing the patented item, *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 133-40 (1969), or to require licensees not to make any items competing with the patented item, *Steward v. Mo-Trim, Inc.*, 192 U.S.P.Q. 410 (S.D. Ohio 1975).

As an original matter one might question whether any of these practices really "extends" the patent. The patentee who insists on limiting the freedom of his purchaser or licensee—whether to price, to use complementary inputs of the purchaser's choice, or to make competing items—will have to compensate the purchaser for the restriction by charging a lower price for the use of the patent. If, for example, the patent owner requires the licensee to agree to continue paying royalties after the pa-

tent expires, he will not be able to get him to agree to pay as big a royalty before the patent expires.

In all of these cases the patentee's total income may be higher—why else would he impose the restriction? But there is nothing wrong with trying to make as much money as you can from a patent. True, a tie-in can be a method of price discrimination. It enables the patent owner to vary the amount he charges for the use of the patent by the intensity of each user's demand for the patent (e.g., the mimeograph), as measured by the user's consumption of the tied product (e.g., the ink). *Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co.*, 77 Fed. 288, 296 (6th Cir. 1896); Stigler, The Theory of Price 210-11 (3d ed. 1966); Bowman, Patent and Antitrust Law 55, 116-19 (1973). But since, as we shall see, there is no principle that patent owners may not engage in price discrimination, it is unclear why one form of discrimination, the tie-in, alone is forbidden.

But whether decided rightly or wrongly these are all cases where the license purports to enlarge the licensee's obligations beyond the limits of the patent grant. There is nothing of that sort here. But we must also consider whether the patent-misuse doctrine goes beyond these specific practices and constitutes a general code of patent licensing distinct from antitrust law.

The doctrine arose before there was any significant body of federal antitrust law, and reached maturity long before that law (a product very largely of free interpretation of unclear statutory language) attained its present broad scope. Since the antitrust laws as currently interpreted reach every practice that could impair competition substantially, it is not easy to define a separate role for a doctine also designed to prevent an anticompetitive practice—the abuse of a patent monopoly. One possibility is that the doctrine of patent misuse, unlike antitrust law, condemns any patent licensing practice that is even trivially anticompetitive, at least if it has no socially beneficial effects. This might seem to explain cases such as *Duplan Corp. v. Deering Milliken, Inc.*, 444 F. Supp.

648, 697 (D.S.C. 1977), aff'd in relevant part, 594 F.2d 979 (4th Cir. 1979), which held that a patent tie-in agreement is misuse per se unless the patentee shows that he had some nonmonopolistic reason for the tie-in, such as protection of goodwill. To prove a tie-in prima facie unlawful under the antitrust laws all you have to show is that the defendant has some economic power in the market for the tying product, *United States Steel Corp. v. Fortner Enterprises, Inc.*, 429 U.S. 610 (1977), and *Duplan* eliminates this requirement in misuse cases. But if a patentee has no market power (and, of course, not every patent confers market power, *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1203 (2d Cir. 1981)) he cannot use a tie-in to practice price discrimination, which presupposes market power. Stigler, *supra*, at 211. Much less can he lever his way into a dominant position in the market for the tied product. The logical presumption in such a case is that the tie-in promotes efficiency—and there is no lack of hypothesis as to how it might do that. See Bork, The Antitrust Paradox 375-81 (1978). It is hard to understand why in these circumstances, where if any presumption is warranted it is that the tie-in promotes efficiency rather than reduces competition, the burden of proof on the issue of misuse should be shifted to the patentee.

But probably cases like *Duplan*—which was, like *Motion Picture Patents Co., supra*, a tie-in case—are best understood simply as applications of the patent-misuse doctrine within its conventional, rather stereotyped boundaries. Outside those boundaries there is increasing convergence of patent-misuse analysis with standard antitrust analysis. See, e.g., *Carter-Wallace, Inc. v. United States*, 449 F.2d 1374, 1378-82 (Ct. Cl. 1971); *Congoleum Indus., Inc. v. Armstrong Cork Co.*, 366 F. Supp. 220, 227-32 (E.D. Pa. 1973), aff'd, 510 F.2d 334 (3d Cir. 1975); *SCM Corp. v. Xerox Corp.*, 463 F. Supp. 983, 997-98 (D. Conn. 1978) (the lengthy subsequent history of this case is irrelevant). One still finds plenty of statements in judicial opinions that less evidence of anticompetitive effect is required in a misuse case than in an antitrust case. See, e.g., *Transitron Electronic Corp. v. Hughes Aircraft Co.*,

487 F. Supp. 885, 892-93 (D. Mass 1980), aff'd, 649 F.2d 871 (1st Cir. 1981). But apart from the conventional applications of the doctrine we have found no cases where standards different from those of antitrust law were actually applied to yield different results. For example, the issue in *Transitron* was whether patent misuse is a tort; the court held it was not.

If misuse claims are not tested by conventional antitrust principles, by what principles shall they be tested? Our law is not rich in alternative concepts of monopolistic abuse; and it is rather late in the day to try to develop one without in the process subjecting the rights of patent holders to debilitating uncertainty. Cf. *Hensley Equipment Co. v. Esco Corp.*, 383 F.2d 252, 261-62 n. 19, amended, 386 F.2d 442 (5th Cir. 1967).

We come at last to the particulars of USM's charge of patent misuse, which the district court dismissed on summary judgment and which for the reasons just explained we think must be evaluated under antitrust principles. The basic charge is simply that SPS has set a discriminatory royalty schedule. But no general principle of antitrust law forbids charging different prices to different customers, what is often but loosely called "price discrimination." (The technical economic definition of price discrimination is disparity of price-cost ratios rather than of prices alone. Stigler, *supra*, at 209.) It is not illegal per se, even under section 2(a) of the Clayton Act as amended by the Robinson-Patman Act, 15 U.S.C. § 13(a). *O. Hommel Co. v. Ferro Corp.*, 659 F.2d 340, 346 (3d Cir. 1981); *American Oil Co. v. FTC*, 325 F.2d 101, 106 (7th Cir. 1963). It might in a particular case be condemned as an attempt to monopolize or as an act of monopolization under section 2 of the Sherman Act, 15 U.S.C. § 2, or as a violation of the Rule of Reason under section 1 of that Act, but USM has made no effort to prove the elements of any of these offenses.

Specifically, there is no antitrust prohibition against a patent owner's using price discrimination to maximize his income from the patent. *Bela Seating Co. v. Poloron*

Prods., Inc., 438 F.2d 733, 738 (7th Cir. 1971). The furthest the courts have gone in condemning patent price discrimination under antitrust principles is in a series of cases involving a patented process for machine peeling of shrimp. See *La Peyre v. FTC*, 366 F.2d 117 (5th Cir. 1966); *Laitram Corp. v. King Crab, Inc.*, 244 F. Supp. 9, modified, 245 F. Supp. 1019 (D. Alaska 1965); *Peelers Co. v. Wendt*, 260 F. Supp. 193 (W.D. Wash. 1966). The patentee leased the machines at twice the price to Pacific Northwest shrimp processors as to Gulf Coast processors, because hand peeling the smaller Pacific Northwest shrimp required twice as much labor. This was price discrimination in its economic sense. The lease rate varied according to the different intensities of the buyers' demands for the patented process (greater in the Pacific Northwest because of higher labor costs replaced by the patented process), rather than according to any difference in the patentee's costs of dealing with the two regions. But the focus of concern of the Federal Trade Commission and the courts was not on the evils of price discrimination in any abstract sense but on the effect of the discrimination in limiting the competition that the Pacific Northwest industry would have been able to offer the Gulf Coast industry if equal lease rates had been charged—an effect that seemed all the more sinister because the patentee had an interest in a Gulf Coast processor.

The decisions have been criticized. See Bowman, *supra*, at 105-10; Baxter, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 Yale L.J. 267, 280-99 (1966). They require a patentee to establish a pricing schedule that will increase competition in the industries that use the invention—as if the function of antitrust law were to compel firms to maximize competition (between customers, no less), rather than to prevent them from restricting it. There is a difference between positive and negative duties, and the antitrust laws, like other legal doctrines sounding in tort, have generally been understood to impose only the latter. The pricing schedule did not harm the Pacific Northwest

industry, but merely left it in the same position relative to the Gulf Coast industry that it had occupied before the patented process was invented.

But whether they were decided correctly or incorrectly, the shrimp peeler cases are distinguishable from the present case; no competitive effects in the market of the patentee's customers have been shown here. See *Bela Seating Co. v. Poloron Prods., Inc., supra*, 438 F.2d at 738-39. USM has made no offer to prove that competition in the manufacture or sale of the products made by SPS's licensees and sublicensees (corresponding to the shrimp peelers) would be greater but for the royalty differential; and it is unlikely that it would be. The main differential is in the amount of royalties retained by USM rather than in the amount paid by the sublicensees. True, there potentially is some differential in that amount. While the usual royalty rate is 4 percent, of which USM retains 3 percent and SPS gets 1 percent, if USM sublicenses the four companies already licensed by SPS and those companies do not drop their SPS licenses, the royalty rate rises to 5 percent, with USM retaining 1 percent and SPS getting the other 4 percent. But a one percent cost difference is too small to give rise to an inference of significant competitive effect.

Conceivably the much larger difference between the amount of royalties retained by USM and the amount retained by SPS could affect competition not among the sublicensees but between these two firms. USM presented evidence that its technology embodying SPS's patent was superior to SPS's own technology and that SPS had imposed the royalty retention differential because it knew that without it USM would outcompete SPS to license the four companies. Even if this were true, it would not get USM very far in making out an antitrust case; as the district court pointed out, the essence of the patent grant is to allow the patentee to exclude competition in the use of the patented invention or, within broad limits not apparently exceeded here, to license competitors only on such terms as he sees fit. In any event, USM made no effort to present evidence of actual or

probable anticompetitive effect in a relevant market, as is required in every Rule of Reason antitrust case in the Seventh Circuit. *Dos Santos v. Columbus-Cuneo-Cabrini Medical Center*, 684 F.2d 1346, 1352 (7th Cir. 1982). There is no argument that the royalty differential is unlawful per se. Patent licensing agreements between competitors are sometimes struck down under antitrust law, of course, but only upon proof of an anticompetitive effect beyond that implicit in the grant of the patent. See Priest, *Cartels and Patent License Arrangements*, 20 J. Law & Econ. 309 (1977).

Moreover, the licensing agreement entitles the four companies licensed directly by SPS to obtain a sublicense from USM on the same terms as USM's other sublicensees. If USM's technology really were better than SPS's—enough better at any rate to make it worth their while to pay an additional one percent royalty to be able to use it—the four companies would have taken up their right to get sublicenses from USM. That USM would have been worse off if they had done so than it would have been had it negotiated a different licensing agreement with SPS in settlement of the earlier litigation is not in itself a basis for finding a violation of the antitrust laws. Those laws are solicitous not of the individual firm but of the competitive process. When, four years into the case (it was filed in 1974, and summary judgment on the misuse issue was granted in 1978), USM had presented no evidence of actual or probable anticompetitive effect, the dismissal of its misuse claim on a motion for summary judgment was proper. See *Weit v. Continental Illinois Nat'l Bank & Trust Co.*, 641 F.2d 457, 464 (7th Cir. 1981); *Products Liability Ins. Agency, Inc. v. Crum & Forster Ins. Cos.*, 682 F.2d 660, 663 (7th Cir. 1982).

The fact that the four direct licensees of SPS had the right at little or no additional cost to demand sublicenses from USM casts doubt, moreover, on USM's explanation of why SPS imposed the royalty retention differential. An alternative explanation is supplied in a deposition submitted by SPS in support of its motion for summary judgment, though not referred to by the district

court. The deposition suggests that the royalty retention differential was an effort to overcome a "free rider" problem. SPS rather than USM had licensed the four companies in question and wanted a fair return on its efforts in doing so. There are costs to lining up licensees, as USM itself has emphasized in contending that 1 percent is too little to compensate it for sublicensing SPS's four direct licensees. Otherwise SPS would not allow USM to keep 75 percent of the royalties on sublicenses obtained by USM. That is compensation for USM's efforts in arranging for the use of the patent. It is overcompensation if the efforts are SPS's, as apparently was the case with the four companies in question; if, in other words, USM wants to reap where SPS has sown. In these circumstances the royalty differential would not even be "discriminatory" in any interesting sense. And antitrust law increasingly is tolerant of contractual arrangements that reduce free-rider problems and thereby increase competition (here, competition to line up patent users). See, e.g., *United States Trotting Ass'n v. Chicago Downs Ass'n, Inc.*, 665 F.2d 781, 789 (7th Cir. 1981) (en banc); *Muenster Butane, Inc. v. Stewart Co.*, 651 F.2d 292, 297 (5th Cir. 1981).

Admittedly there is irony in our recitation of the reasons that the challenged features of the licensing agreement may actually be procompetitive and in any event are not anticompetitive, when the district court found, in findings that we have not reviewed, that the patent was procured by fraud and was therefore invalid. If the patent really is invalid, and well it may be, the licensing agreement may be altogether more sinister than our discussion implies; USM and SPS are, after all, competitors. But unless we are to overrule *Wikomi*, which we have no mind to do, we must approach the misuse issue on the assumption that the patent is valid, for the defense of res judicata prevents USM from showing the contrary. Of course nothing we say in this opinion is intended to prejudge any other challenge that may be brought against SPS's patent; and, in any event, the patent has now expired, and can no longer restrain trade.

To sum up, we vacate the order of the district court holding SPS's patent invalid and granting USM other relief, and otherwise we affirm the orders appealed from, with costs in this court to SPS.

SO ORDERED.

A true Copy:
Teste:

Clerk of the United States Court of Appeals for the Seventh Circuit

USCA 30224—Midwest Law Printing Co., Inc., Chicago—12-3-82—400

Opinion by Judge Posner
JUDGMENT — ORAL ARGUMENT

UNITED STATES COURT OF APPEALS
For the Seventh Circuit
Chicago, Illinois 60604
December 3, 1982

Hon. WILBUR F. PELL, JR., Circuit Judge
Hon. POTTER STEWART, Associate Justice (Retired)
Hon. RICHARD A. POSNER, Circuit Judge[1]

USM CORPORATION Plaintiff-Appellant, Cross-Appellee Nos. 78-2307, vs. 81,1878, and 81,1908 SPS TECHNOLOGIES, INC. Defendant-Appelee, Cross-Appellant	) Appeal from the United States District Court for the Northern District of Illinois, Eastern Division)))))) No. 74-C-1514) Judge Nicholas J. Bua

This cause was heard on the record from the United States District Court for the Northern District of Illinois, Eastern Division as was argued by counsel.

On consideration whereof, IT IS ORDERED AND ADJUDGED by this Court that the judgment of the said District Court in this cause appealed from be, and the same is hereby, VACATED in part, and AFFIRMED in part, with costs on asppeal to SPS, in accordance with the opinion of this Court filed this date.

---

*Judge Sprecher was originally the third member of the panel, but his untimely death prevented his participation in the decision of this case. Judge Posner took his place and has read the briefs and pertinent portions of the record and listened to the tape recording of the oral argument.

UNITED STATES COURT OF APPEALS

For the Seventh Circuit
Chicago, Illinois 60604

January 11, 1983

Before

Hon. WILBUR F. PELL, JR., CIRCUIT JUDGE
Hon. POTTER STEWART, Associate Justice*
Hon. RICHARD A. POSNER, Circuit Judge

USM CORPORATION	)
	) Appeal from the
Plaintiff-Appellant	) United States District
	) Court for the
Nos. 78-2307, vs.	) Northern District of
81-1878,	) Illinois, Eastern
81-1908	) Division.
	)
SPS TECHNOLOGIES, INC.	) NO. 74-C-1514
	) Nicholas J. Bua, JUDGE.
Defendant-Appellee	)

ORDER

On December 23, 1982, plaintiff-appellant USM Corporation filed a petition for rehearing with suggestion for rehearing en banc. All of the judges of the original panel have voted to deny the petition, and none of the active members of the court has requested a vote on the suggestion for rehearing en banc. The petition is therefore DENIED.

---

*Of the United States Supreme Court (Retired).